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EDITORIAL

It is our pleasure to provide April 2004 Issue of the Journal of International Society for the History of Islamic Medicine (Journal of ISHIM), which was delayed because of the financial difficulty. This issue contains some scientific articles, in which, we can see both important researches and valuable original papers on History of Islamic Medicine. These articles are from famous scholars of many countries of the world. So, this journal helps in development of researches on the History of Islamic Medicine. After 12 papers, news of some scientific meetings are present in this issue.

The first paper by Dr. Mahmood Al-Haj Kasim Mohammed is on the Investigation and Emptying Instruments of Arab and Moslem Surgeons. The second paper by Dr. Arish M.K. Sherwani, Abdul Nasir Ansari, Humaira A.H. Ansari and Izhar Ahmed Jameel Ahmed Ansari is about the Contribution of Albucasis (Abul-Quasim Zahravi) in Venesection. Another article by Dr. Sahin Aksoy is on The Religious Tradition of Ishaq ibn Ali al-Ruhawi: The Author of the First Medical Ethics Book in Islamic Medicine. The fourth paper by Dr. Sharif Kaf al-Ghazal is on Medical Ethics in Islamic History at a Glance. The fifth paper by Dr. Ibrahim Basagaoglu and Dr. Dogan Uvey is about Istanbul Maltepe Military Hospital's Pharmacy. The next paper by Dr. Omur Elcioglu and Dr. Hilmi Ozden is about Common Thougths of Socrates and Yusuf Khass Hajib on Wisdom and Virtue. The seventh paper by Dr. Zuhal Ozaydýn is on Some Landmarks in the History of Medicine in Istanbul (Materials, Books, Documents, Periodicals and Buildings). The eighth article by Dr. Aysegul Demirhan Erdemir is about the Importance of Milk from the Point of View of the History of Turkish Child Care and Some Scientific Results. Another article by Dr. Omur Elcioglu and Dr. Atilla Yýldýrým is about Ethical and Legal Problems with Assisted Reproduction in Turkey. Tenth article by Dr. Nuket Ornek Buken and Dr. Erhan Buken is on Patient's Rigths in Turkey. Another article by Dr. Dogan Uvey, Dr. Ayse Nur Gokce and Dr. Ibrahim Basagaoglu is about Pharmaceutical Industry in Turkey. The last article by Dr. Elif Atýcý and Dr. Teoman Atýcý is about the Development of Orthopaedics and Traumatology in Turkey and Some Results.

Wishing April 2004 Issue of the Journal of ISHIM, to be beneficial to all readers and colleagues.

Editors in Chief
Dr. Aysegul Demirhan Erdemir
Dr. Abdul Nasser Kaadan

Investigation and Emptying Instruments of Arab and Moslem Surgeons[1]

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Summary

In this paper, some knowledge are given on Investigation and Emptying Instruments of Arab and Moslem Surgeons. The topics such as vaginoscope, mirror of vagina, non-immersed skull perforator, the probe (a long needle, cannula for paracentesis, lithotripsy instruments, injection instruments, probe for imperforated urethra) are studied and some results are obtained.

Key Words; Arab Surgery, Instruments, History of Medicine.

Instruments of Investigation

1. Vaginoscope:

Arab and Moslem doctors were not acquainted with treating by the speculum or the laparoscopy as known nowadays. All we could find in this respect is the vaginoscope which is an instrument invented and used by Albucasis (937-1025 A. C.) to examine the vagina of women. This instrument was called by Albucasis a speculum because it moves on a screw which is the pivot of its opening and closing. This instrument differs greatly from that designed by Surans" (1).

Albucasis says in chapter 77 (2): "On the forms of instruments necessary for extracting the foetus: speculum for opening the entrance of the womb". After he draws a figure which represents the speculum (fig. 1), he says:

"This is the type of instrument with which books are pressed. It has two screws at either end of two pieces of wood; but this instrument should be more slender than a book press, and should be made of ebony or boxwood. The width of each piece of wood should be about two fingers' breadth and the thickness about one, and the length a span and a half; and in the middle of both pieces of wood, firmly attached, should be two projections made of the same kind of wood, each half a span long or a little more, and two fingers wide or a little more. It is these two projections that are to be introduced into the vagina so that it is thereby opened when you turn the screws".

Then, he draws a figure of another instrument which is used for the same purposes and says:

"Another instrument, for the same purpose, but smaller and lighter (fig. 2). It is made of ebony or boxwood in the shape of forceps, but at the end it has two projections as you can see; and the length of each is about a span and the breadth two fingers. When you wish to open the womb with this, make the woman sit on a couch with her legs hanging down, parted; then introduce the two projections pressed together into the orifice of the womb while you hold the end of the instrument lower down between her thighs; then open your hand in the same way as you would do with forceps, to the extent to which you wish to open the womb, so as to allow the midwife to do what she desires".

2. Mirror of Vagina:

Traditional and religious strains, to which Moslem women submit, have undoubtedly made it difficult to practice gynecology as much as this occu-

[1] Translated by: Duaa Mahmood Al-Haj Kasim

pation needs in the examination and treatment. This made Arab and Moslem doctors refrain from examining the women by themselves, but they gave their instructions to the midwives to do that under their directions. Midwives used to describe what they felt, and the doctors depended on this description in the diagnosis and treatment.

Rhazes (865-927 A. C.) is considered to be the first one who examined the virgins by touching the contents of the pelvis by the finger through the anus. One of the most amazing ways of examination mentioned by Rhazes, is putting a mirror under the woman to see the state of things as they are. He says: "put the mirror under the woman to see the state of a thing as it is" (3).

3. Non-immersed Skull Perforator:

When speaking about treating skull fractures, Albucasis mentioned what he calls the non-immersed skull perforators. They are of the instruments invented by him, as he had described an instrument which does not pierce the cranial bone through to what is beneath. This instrument consists of a mineral piece wider than the orifice caused by the skull perforator, so it works as a stopper in order not to pierce (the meninges and the brain) (4).

4. The Probe (a Long Needle):

Speaking about the Elephant of the throat (goitre), Albucasis says: "the other resembles the tumour arising from an arterial aneurysm, and it is dangerous to incise it, so on no account must you apply a knife to the latter kind, except any that are small; if you try and explore them with a probe and you find they are like sabeceous cysts and not adherent to any blood-vessel, then immediately cut down upon them as you would a cyst and remove them with whatever capsule may surround them, if they are contained within a capsule; and if not, dissect away the whole" (fig. 3) (4).

In treating the cyst (sebaceous cysts) by surgery, Albucasis refers to the same method. It is the method of treatment that is used nowadays. He says:

"When you come to treat the cyst, you should sound it with the instrument called the explorer (fig. 3) … take this instrument and press it in at the spot where the tumour is … then remove the explorer and see what comes out after it. If a humidity should flow, whatever the colour, make a simple incision, as I said for the other tumours. But, if no humidity come out along the track of the explorer you know at once that it is fatty. Therefore, make a cruciform incision upon it in this shape … and attach hooks and dissect away the skin … be careful with the capsule; if you can, get it out whole, together with the cyst" (4).

Instruments of Emptying

1. Cannula for Paracentesis:

Rhazes has thoroughly described paracentesis in the case of ascites, its precautionary measures and some of its complications. He says:

"make the patient stand still … if he can not do that, do not treat him by paracentesis because only those who are strong enough, should be treated by paracentesis. Be careful not to tear the peritoneum, then excoriate the skin from the peritoneum down the perforation of the skin. Then make a small perforation, thus the peritoneum perforation will be under the skin perforation because in this case when you pull out the cannula, the water will be held back because the skin covers the peritoneum and the two perforations are not opposed to each other. Then introduce a cannula made of copper inside it, which will bring the water out in a sufficient amount, because it is dangerous. When you finish, let him lay down and take care of him until he gets better" (5).

2. Lithotripsy Instruments:

A Rhazes was the first one to describe what is known as lithotripsy. If the calculus is big, Rhazes says:

"watch that the perforation of the skin and flesh is big enough to make the calculus come out easily … If it is too big, do not make a big perforation because it causes chronic urinary fistula and the wound will never heal up. So, manipulate it until one of its sides comes out, then catch it with this instrument until it begins to break. Do not let it go, then push it and catch it until it breaks down into pieces, then pull it out" (6).

B- Albucasis followed him in describing this method in details as he had an instrument which he used in lithotripsy. Besides, he was the first one to

use a method for the lithotripsy of the urinary passage, he says:

"Now, if the calculus be small and be impacted in the opening of the urinary passage, preventing the exit of the urine … take a drill of the finest steel … It should be triangular at the point and sharp, with a wooden handle. Then take a thread and with it bind the penis beneath the calculus to prevent the stone from returning to the bladder. Then introduce the iron of the drill gently into the meatus until the drill reaches the stone itself, and then very very gently revolve the drill upon the stone with your hand, and try to perforate it, till you pierce it through to the other side. Then the urine will at once be released. Then, with your hand outside the penis, squeeze the remains of the stone, and they will crumble and be washed out by the urine and the patient will be cured" (7).

3. Cannula for Imperforated Anus:

Albucasis says about this:

"Infants are quite often born with the anus imperforated, closed by a fine membrane, then the midwife should perforate the membrane with her finger or pierce it with a sharp scalpel, being careful not to tough the muscle. Then wool dipped in oil and wine should be applied … If you are afraid it may close up, put into the opening a leaden tube for many days, which will be removed when the child wants to evacuate the bowel. Sometimes also the anus is closed by the scarring of a wound or an abscess; then the scarring should be incised, and then dressed by those methods we have mentioned" (7).

4. Probe for Imperforated Urethra:

Albucasis says about the treatment of some children who born with imperforated urethra or have too narrow meatus:

"Sometimes a boy is born from his mother's womb with the glans penis not perforate. So, at the moment of his birth you should be quick and make a perforation with a fine scalpel … Then put in the opening a slender leaden sound, tie it and keep it in for three or four days. When he wishes to make water, it will be removed and he will do so … The case having too narrow a meatus should be treated with the leaden sound, as we have said, for many days until it is wide enough" (7).

5. Using Catheters and Swabs:

Rhazes is considered to be the first one who used swabs in the surgical operations. He has also described in detail the method of using "catheters through which pus and poisonous excretions pass". And he is the one who added to them side openings in order not be blocked by blood or pus (8).

Albucasis says:

"if the matter is very urgent with the patient, then you should attempt to bring it out with the instrument called a catheter", of which this is the figure (fig.4). He adds "it is made of silver, slender and smooth and hollow like the quill of a bird's feather; as slender as a probe; about a span and a half in length; and with a tiny funnel at the end" (9).

Albucasis emphasizes the importance of using a swab in the infected tumours by saying:

"Then, after you have opened the tumour, you should cleanse the wound and consider if the tumour has only a small opening, or it is one simple incision, employ swabs of lint or cotton wool; but if it is a large tumour with multiple incisions, introduce a swab into each incision so that they meet" (9).

Injection Instruments

1. Albucasis described, for the first time in the history of surgery, a method for irrigating the bladder. He invented for this purpose, the common injector (syringe) used nowadays, if the needle added to this injector, medicines can be introduced to the body by using it. Albucasis says:

"chapter 59: On the manner of irrigating the bladder with a syringe … this is its figure (fig. 5) … It is made of silver or ivory, hollow, with a long fine tube, fine as a probe; entirely hollow except for the end, which is solid with three holes in it … The hollow part containing the plunger is exactly of a size to be closed by it, so that any liquid is drawn up with it when you pull it up; and when you press it down it is driven in a jet … So, when you wish to inject fluid into the ladder, dip the end of the syringe into the liq-

uid and draw up the piston, for the fluid will be drawn up into the cavity of the syringe. Then introduce the end into the urethra … Then expel the fluid by means of the piston; the fluid will immediately flow into the bladder" (9).

2. Albucasis is the first one who discovered the bulb syringe. He is the first person to describe a bulb syringe with a leathery piece attached to it and used it for ministering enemas to children (fig. 6) (10).

Instruments for Helping Breathing and Feeding:

1. Tracheotomy:

Tracheotomy is used to save the lives of asphyxiated patients. It is said that the Greek physician Sqlipiadous (11) (born 124 B. C.) was the first one to use it. Bin Masawayh, on the other hand, is the first Arabic doctor who described it, and Rhazes quoted from him. He says:

"Bin Masawayh says that the neck should be stretched out and the skin should be extended and cut, then stretched by two threads upwards and downwards until the larynx appears. Then a cut is made between two of its cartilage and the membrane that links them and a cut is also made in the middle of this membrane for suturing. When the pain is relieved and the patient's breathing becomes normal, the wound should be sutured and held for a while, then add to it a yellow powder"(12).

But, there is no evidence that any of them had practiced the operation. Albucasis says that it is not dangerous and it could be carried out. They were followed by Avenzoar (1094-1162). He developed this operation, and his tendency towards the experimental medicine helped him a lot. As he practiced this operation on goat and watched its development and healing up and proved for the first time that the cartilage of the larynx can completely heal up after the healing of the operation wounds. His book (AL-Tayseer) became the main reference in this field (13).

2- Breathing and Feeding Tube:

Another method used for treating asphyxia is by introducing a tube made of gold or silver to the larynx. This method is still used now to save the asphyxiated patients as well as introducing the anesthetic gases and the oxygen to the patient's chest. Yet, it is now made of robber or plastic (14).

Avenzoar has also introduced new methods in feeding the patients by using a silver tube be introduced to the pharynx. This can be considered the first description of the stomach tube. He was also the first one who advised to feed the patients through the anus in the case of pharyngostenosis (15).

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The Contribution of Albucasis (Abul-Qasim Zahravi) in Venesection

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Summary

In this article, Venesection, major root of medical practice and the contribution of Albucasis in Venesection are stressed. Moreover, its historical development, procedure and its scientific evaluation are also pointed out.

Key Words; Venesection, Bloodletting, Phlebotomy, Unani.

Introduction

Venesection may be the oldest of surgical procedures. Hippocrates referred to it; already it was so familiar as to need no direction. Until modern times it was the most universal operation. Celsus seems to be the first to put it on a scientific footing. He advanced the teaching of it to the point that Venesection had indication even in the very young and the very old, in pregnancy, in other conditions in hitherto deemed outsides its scope. Phlebotomy thus become, and remained through Romans, Arabs and Medieval European medicine, the universal remedy. Paulus most likely inspired Albucasis; who excels all previous writers by numbering no fewer than 30 blood vessels as suitable for Venesection.

The practice of bloodletting has been used by almost all cultures and societies at some point in their medical history. The controversy over the usefulness of it has been ranging since the fifth century B.C. It was considered to be the part of treatment for practically every ailment that you can think of; asthma, spitting blood, bruises, cough, consumption, contusion, convulsions, cramps, deafness, delirium, epilepsy, giddiness, gout whooping cough, hydrocephalus, headache, intoxication, lethargy, hysteria, lunacy, measles, palsy, rheumatism, sciatica, shortness of breath, and sore throat. It was also thought not as commonly, used as a punishment and as a form of worship to a superior power. It is believed in Graeco-Arab (Unani system of medicine) that hysteria gave rise to an accumulation of “putrid humors” which impaired the organs whose function was to purify the blood and caused this physical affliction. Bleeding and purging are the universal remedies for these humors and so they were employed for the treatment of hysteria as well. Such patient would be bled and then administered medicines that “fortified” the blood such as iron fillings. This practice continued in to the eighteenth century. It experienced a great vogue in the eighteenth and nineteenth centuries.

Venesection is often mentioned in connection with Anglo-Saxon leech craft. But the importance

seems to be placed on the timing of the operation rather than procedure it self. This is an example of a diagnosis given for paralysis: "scarify the neck after the setting of the sun, pour in silence the blood in to running water, after that spit three time, then say, "Have thou this unheal, and depart away with it"; go again on a clean way to the house, go either way in silence."

Types of Bloodletting

There are three main ways of letting blood in Graeco-Arabic (Unani) system.

1. ***Phlebotomy:*** which is the direct cutting of a vein to release blood. It is often done with a knife and a spring-loaded knife.
2. ***Cupping:*** If the patient is too young, old, or weak to stand phlebotomy, cupping is advised. This was the act of applying a cup, in which a vacuum had been created through the use of fire, to either intact skin to cause it to fumify or to a place where small incisions had been made, to draw out blood.
3. ***Leeching:*** It was very popular in Arab physicians because it required little skil;one could do it oneself in the home and the leeches were ready to suck blood at any time. An adult would use between twenty and fifty leeches. They were also popular because they could be used in places that phlebotomy & cupping could not, be used, such as internal membranes. They were also often applied inside the nose, ear, eyes, mouth, anus, and vagina.

Sites of Venesection

The blood vessels in the body, which it is customary to open, are thirty-two in numbers. There are sixteen of them in the head, and there are two pulsating vessels behind the ear that are called the two occipitals; the two external arteries in the temples, and the two occipitals; the two external arteries in the temples; and two veins in the two internal angles of the eyes, called the vessels of sight; and the vein running up the middle of the forehead, and the vein situated at the tip of the nose; and the two jugular veins in the neck; and the two vein in the upper lip and two in lower lip; being known as 'the four vessels', and two veins beneath the tongue. As for the veins that are bled in the arm and hand, they are five. One is the cephalic, which is on the outer side, popularly they called it the 'head vein' then there is the blue black, that is the median vein, which is made up of a branch from the basilic and a branch from the cephalic.

Procedures and Instruments of Venesection as described by Albucasis

Phlebotome (fa's): Literally a pick axe, this was used for piercing down ward according to Antyllus.Romans had popularly used it for body vein; then the basilic vein; this is the one situated on the inner side and is termed also the axillary vein but popularly it is called the 'belly vein'; then the cord of the vein over radius, this is one that is clearly visible on the thumb. And the salvetella vein between little and ring finger, three veins in the leg and foot (sciatica, saphena and external saphena); two veins behind the ear that relief in chronic catarrh, migraine and chronic foul pustules, and scabs of the head.

Method

Patient's head should be shaved and the hinder part in the region of the two veins, should be strongly chafted with a rough cloths; then patient should bend his neck with his turban until the two veins are visible; there position is behind the ear in the two flattened places of the head; feel for them with your finger and when you feel there pulsation beneath your finger then mark the place with ink. Then take a knife-scalpel, known as Lancet and insert it beneath the vessels in to the skin until the scalpel reaches the bone; then lifting with your hand both vessels and skin make an incision dividing both skin and vein; the length of the incision should be about two finger side by side.

1. ***Scalpel:*** (Mibaza -the plain knife)
2. ***Lancet:*** (Al mibda 'al nashl- a cutting or transfixing knife).

Venesection, Cure for Several Diseases

1. Section of two arteries in the temples gives relief for chronic migraine; sever headache,

constant ophthalmic and the flow of acrid superfluities in to the eyes.

2. Venesection of the two lachrymal veins gives relief in the diseases of eyes such as granular conjunctiva, inflammation, pannus and the diseases of the face.
3. Nasal Venesection helps in acute fever, violent headache, and in diseases of face such as red postules that arise on the nose.
4. Jugular Venesection helps in tightness of breath and the early stage of elephantiasis, melancholic diseases like vitiligo, impetigo, malignant ulcers and cancrum oris.
5. Lip veins (four) and cephalic Venesection is effective for pustules on the mouth and rotting of the gums, malignant ulcers, fissures of the lips and malignant ulcers in the nose and round about.
6. Venesection of the two veins under the tongue effects in quinsy.
7. Basilic Venesection cures the disorders below the throat and neck, in the parts neighboring the chest and abdomen.

Bloodletting In Modern World

One of the controversies surrounding bloodletting was how much blood to let. One of the general thoughts on the amount of blood to let was to bleed the patient until syncope. Syncope is defined here in this 1848 medical dictionary; “complete and, commonly, sudden loss of sensation and motion, with considered diminution, or entire suspension of the pulsation of the heart and respiratory movements”. In the current day, this condition is not very differently thought of than shock. This is why, as time moved on, bloodletting was practiced more and more by skilled surgeons who were thought to be better educated in how to bleed without death or permanent damage. In the early Middle Ages bloodletting was almost entirely done by barber-surgeons. But once again as time moved on, this practice became more and more the domain of skilled surgeons, especially during the aforementioned vogue of the eighteen and nineteenth centuries. The use of bloodletting declined as better cures were found for the problems it treated. Some aspects of bloodletting still exist today. Leeches are used in limb re-attachment and re-constructive surgery to keep a steady flow of blood through the tissue, and it has been said that a man should give blood once a year to lower the risk of a heart attack.

The word “phlebotomy”, is now, in the modern day, defined as the practice of removing or “letting” blood for diagnostic, rather than therapeutic reasons. This is now the only form of medical bloodletting that is generally practiced. Phlebotomy is done with a syringe. The piston-and-cylinder was first used on wounds to extract pus. The invention of this device is attributed to the son of a barber in Alexandria, Egypt around 280 B.C. The use of an evacuated blood collection system became popular in 1943 with the marketing of the VACUTAINER BRAND SYSTEM.

Conclusion

Clinical Research Trial of Venesection is needed in chronic diseases of iceberg, which are incurable by modern methods of treatment and their sequelae also ends in chronic debilitating and crippling, disabilities.

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The Religious Tradition of Ishaq ibn Ali al-Ruhawi: The Author of the First Medical Ethics Book in Islamic Medicine[1]

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Summary

After 5th century A.D. cities of Urfa (Edessa or Ruha as is known in the history) and Harran had become to be a distinguished centres for science. In those centuries the books written in the Ancient Greece was translated into Arabic at the 'School of Harran', but later many original books were written by the scholars at this school. Among these scholars Ishaq ibn 'Ali Al-Ruhawi and his key text *Adab al-Tabib* have a special relevance to the History of Medicine.

This work aims to examine the unique and only hand-written Arabic copy of *Adab al-Tabib* and its English translation made by Martin Levy. The study not only demonstrates the revolutionariness and farseeningness of er-Ruhawi's deontological treaties but also critically analyses the English translation of the book as well as the western literature on it. The paper demonstrates how important it is to have some basic knowledge about the tradition and the belief of the writer whom you translate his book. Otherwise it is inevitable to misinterpret not only the concepts but also the words.

Key Words; Islamic Medicine, Medical Ethics, Al-Ruhawi, Urfa, Ruha.

The areas laying between the rivers Dicle and Firat (Tigris and Euphrates) is called Mesopotamia, and has cradled many civilisations for centuries. The most distinguished part of the region, Diyar-i Mudar, includes Urfa and Harran, and had been an important centre of learning in the history (1-3). Urfa, a southeaster city in Turkey, is known in the history as Edessa in Greek, Orhai in Syriac and al-Ruha in Arabic. Many different civilizations governed the city, from Assyrians to Romans, from Persians to Seljuks. Muslim governing came to Urfa in 639 B.C. (4).

The history of being a learning center goes back to 5th century. When the Constantinople patriarch Nestorius declared that Christ is the son of Mary not the son of God, so go against trinity, he and his followers forced to leave the city. Nestorius and his followers, collectively called Nestorians, moved to Edessa. They established a school in Edessa and turned the city to a learning centre (5,6). They started with the translation of Ancient Greek texts into Arabic, which had contributed a lot to the advancement of learning in the region (7).

Although the academic and elite language was Arabic in the city there were scholars from various races and religions i.e. Arabs, Persians, Turks, Muslims, Christians, Jews, and Sabians. Despite this diversity there was a great harmony that can be a good example to every generation in the history. Even after the migration of Nastorians from Edessa to Jundishapur Harran and Edessa continued to be an attraction center for scholars from different fields.

Edessa and Harran are better know with the translations made in these places but after the 8th century, where it became to be known as Ruha, there were scholars who had written original books with a good review of previous writers. Among them Ishaq bin Ali al-Ruhawi and his book Adab al-Tabib has a special relevance to the History of Medicine.

This paper aims to examine the unique and only hand-written Arabic copy of *Adab al-Tabib* and its English translation made by Martin Levy. Our study will not only demonstrate the revolutionariness and farseeningness of al-Ruhawi's deontological treaties

[1] A similar version of this paper was presented at the '*International Congress on the History of Medicine*', Istanbul, 1-6 September 2002.

but also show how important it is to have some basic knowledge about the tradition and the belief of the writer whom you translate his book. Otherwise it is inevitable to misinterpret not only the concepts but also the words. We intend to critically analyse the English translation of the book as well as the western literature on it, so to come to a reliable conclusion.

Unfortunately, not much is known about Ishaq bin Ali al-Ruhawi. He is mentioned only in an indirect fashion in Ibn abi Usaibi'a's biographic dictionary *'Uyun al-Anba'*. We know that he lived in Ruha at the end of 9th century. He wrote 3 books other than *Adab al-Tabib*. 1) A compilation of first 4 books of Alexandrian Canons; 2) Introduction to Dialectics for Beginners and 3) On Examination of Physicians (8). Literature available about al-Ruhawi in this century is very limited. They are only Levey's articles (9,10), Bürgel's chapters(8,11) and Sezgin's book on the 'History of Arabic Literature' (12). In fact we are thankful to all these writers for introducing us such an important scholar and his work. Especially Levey's English translation of the Adab al-Tabib was a significant contribution to medical history literature. However with all due respect to Levey and his work, we believe that it is a duty for us to re-examine his translation and define the points that we think he made some mistakes, intentionally or unintentionally, in interpreting al-Ruhawi.

While Levey was introducing al-Ruhawi in his book, in the second sentence he wrote;

> "Al-Ruhawi was probably from Ruha, a city in Northwest Mesopotamia. It is also known that al-Ruhawi was a Christian" (10).

Although the religious affiliation of a scholar may not be relevant or important for some people, it must be imperative for Levey that he mentioned this in his very first sentences. Nevertheless it is not unique to Levey, also Bürgel tells about al-Ruhawi's religious affiliation in the introduction part of both of his articles (8,11), and he writes al-Ruhawi was a Jewish. We do not wish to be perceived as religious take-siders but both of these information are needed to be re-evaluated since, at least one of them is wrong, if not both.

None of the authors give any evidence why they think he was a Christian, or a Jewish. We do not want to assume that it was a traditional reflex of a western orientalist medical historian just not to give the credit of a valuable medical text to a Muslim scholar. We wish they live and answer this question. Since they cannot speak for themselves contemporary medical historians like Dr. Lawrance Conrad, who also suggests that al-Ruhawi was a Christian, may enlighten us.

Anyone who reads the Arabic original of the book (13), or even read the English translation of it, without looking at the footnotes can easily understand that al-Ruhawi was a learned Muslim scholar. Al-Ruhawi begins his book with the words;

> "In the name of Allah, the Beneficent and the Compassionate in Whom I have trust and for Whose help I ask"

Every medical historians who has some basic knowledge about history of Islamic Science knows that this is a very typical introduction for a Muslim writer. We can argue that it is not possible to find any non-Muslim writer in the history who starts his book the way al-Ruhawi starts, since this is not familiar to non-Muslim world.

Al-Ruhawi use the word 'Allah' hundreds of time in his book, though Levey mostly prefer to translate it as God, and the other names and attributes of Allah, like Exalted, Beneficent, Compassionate, Life Giver, Healer, Creator, etc. As it is known that there are 99 names and attributes of Allah (Asma al-Husna) in Islamic understanding, which is not the case neither in Christianity, nor in Judaism. The frequent usage of these phrases is also an evidence of al-Ruhawi's religious belief. Levey, may be to strengthen his claim, tells in the very first footnote that

> "Use of the word Allah is not meant particularly to designate the Muslim idea of God. Further, the words Muslim, Arabic, and Islamic are generally used synonymously to designate the period."

We see this as a useless effort since it is very obvious that the word Allah is meant, for an objective reader, to designate the Muslim idea of God.

There is another part of the text that leaves no doubt about the religious affiliation of al-Ruhawi. He writes in the introductory part of the first chapter that;

> "The first thing in which a physician must believe is that all in this world has only one able creator who performs all deeds wilfully.……
>
> The second article of faith in which a physician must believe is that he have credence in the great Allah with a firm affection, and is devoted to Him with all his reason, soul, and free will.……
>
> The third faith which a physician must posses is that Allah sent His messengers to mankind to teach them what is good since the mind alone is not sufficient. Thus, without His apostles, it is not enough for man.……
>
> In all these matters, the physician must truly believe since all the holy books and ancients affirm them. No believer can deny them."

As it is apparent, al-Ruhawi summarizes exactly the five pillars of Islam. After this statement it is hard to understand why Levey and Bürgel suggest al-Ruhawi not to be a Muslim.

Both authors use two things as an evidence to claim that al-Ruhawi was critical to Islam. One of them is his statement on drinking wine. Normally, it is assumed that a Muslim physician should not advise to drink alcohol. But al-Ruhawi writes that;

> "Wine is good both for the healthy and ill. For healthy people, it is quicker nourishment than other foods because of its quick ripening, its penetration into the liver, and its changing into…."

> "It is useful for the ailing if they use it appropriately, in moderation both in quality and quantity."

They rightly suggest, by looking at these statements that he is not a Muslim. But they fail to consider the following part of the statement wherein al-Ruhawi tells about the harmful affects of wine. He says;

> "The damages are so great that the listing and description of them would be quite lengthy. When you investigate the harm and vice brought to victim, they are so abundant and apparent that even one who is not a physician is fully aware of them. How many healthy people it makes ill! How many kinds of death it causes! From the brain, it takes away its memory, corrupts its understanding and renders its imagination turbid! How much it dries up the nerves! How much it makes the limbs tremble and the senses weakened! How many kinds of evil changes it causes the soul in his sleep!.……These are the end results of the vices of wine drinking and the end results of its addiction. This is so that you will understand the details which I do not see fit to discuss."

When we consider al-Ruhawi's statement on wine in whole, it just indicates that he was an open-minded Muslim physician, who tells the good and bad sides of everything without paying any attention whether it is forbidden or encouraged in Islam. As a good physician his primary concern is nothing but to be beneficial to the patients as well to protect the health of the people.

Due to time constraints we will not be able to go further to exhibit other misinterpretations of Levey. But this is the subject of another article we are currently working on.

As a conclusion it is possible to say that, Levey, Bürgel and other western medical historians were wrong on religious affiliation of al-Ruhawi. Although the scientific and intellectual contribution of a scholar is more important than his religious affiliation, both Levey and Bürgel misstate in their writings that al-Ruhawi was not a Muslim. Therefore I want to take this as a duty to correct this mistake, for the sake of future medical historians, and show the concrete evidences that he was a learned and open-minded Muslim physician.

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Medical Ethics in Islamic History at a Glance

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Summary

The definition of ethics and morality in medicine has lately become a favourite and hot topic for politicians and non-physician bureaucrats who lack the insight into the whole garnet of patient- physician relationship. It is time that the physician stood his/her ground. He/She is still regarded very highly and trusted by the people as shown by polls. Unless the physician takes proper steps, the public trust is likely to wither away.

Every teaching physician needs to realise his/her duty - to train the budding physicians, not only in the art of medicine, but also in handling the ethical dilemmas of medical practice.

Key Words; Medical Ethics, History of Medicine.

If one looks back, it becomes apparent that *Hadith* refers to these problems (1). It will also be of interest to note that problems faced by the physicians and the patients today are not any different from the problems faced in earlier periods of history. would like to quote some sayings of prophet Mohammad (PNUH) on the responsibility of the physicians.

> ***"A person who practices art of healing when he is not acquainted with medicine, will be responsible for his actions."***

In another *Hadith* the prophet said:

> ***"O servants of Allah, seek treatment, for Allah has not sent down any illness without sending down its treatment."***

Islamic teachings made treatment mandatory when it was definitely available, and also if holding off this treatment would be harmful. But if one is unsure of any benefit from a treatment and any harm is feared, then it is discouraged. These principles were designed to discourage quackery and protect the patients.

One of the most extensive works dealing with ethics was written in the 10th century by Ishaq ibn Ali Ruhawi, a Christian who embraced Islam. It is not possible to cover here all aspects of his writings. His book, *Adab al-Tabib* (Ethics of a Physician) is an extensive work. Its English translation appears in the Transactions of the American Philosophical Society, Philadelphia (2).

The Islamic philosophy and the Muslim code was so realistic and practical that al-Ruhawi was at case in dealing with this difficult subject. The society was changing from a tribal primitive society to a more orderly society with emphasis on human values and strong religious feelings. These were times of great changes. Therefore, the setting for this work was not any different from the one prevailing at present. It may be worthwhile just to glance at the titles of the 20 chapters of *Adab al-Tabib*:

1. The loyalty and the faith of the Physician, and Ethics He Must Follow to improve His Soul and Morals.
2. Care of the Physician's Body.
3. What the Physician Must Avoid and Beware of.
4. Directions of the Physician to the Patient.
5. Manners of the Visitors.
6. Care of Remedies by the Physician.
7. What does the Physician Asks his Patient and Nurse.
8. What does the Patient Conceal from the Physician.
9. How the Healthy and ill Must Take Orders of the Physician.
10. Training of Servants by the Patient before Illness.
11. Patient and Visitors.

12. Dignity of the Medical Profession.
13. Respect for the Physician.
14. Physicians and Peculiar Incidents to Aid Treatment.
15. Medical Art for the Moral values people.
16. Examination of Physicians for accreditation.
17. Removal of Corruption of Physicians.
18. Warning against Quacks.
19. Harmful Habits.
20. Care of the Physician Himself.

Adab al-Tabib is a beautiful illustration of the fact that problems of responsibility, ethical dilemmas, and needs of the society are nothing new to medicine. A review of this work brings home the realization that the present day physician may have been derelict in his responsibility towards the current ethical needs. In the past, it was the physician who was the advocate of morality and defended ethics.

Also in the 9th century, when the medical profession was a well respected specialty and its leaders kept it this way by laying down proper ethics (2, 3). Abu al-Hasan Al-Tabari (born in 838 A.D.) the chief physician in 870 A.D., described in his book (*Firdous al-Hikmat*) - The Paradise of Wisdom - the Islamic code of ethics as follows:

I. Personal Characters of The Physician

The Physician ought to be modest, virtuous, merciful, and un addicted to liquor. He should wear clean clothes, be dignified, and have well- groomed hair and beard. He should not join the ungodly nor sit at their table. He should select his company to be persons of good reputation. He should be careful of what he says and should not hesitate to ask forgiveness if he has made an error. He should be forgiving and never seek revenge. He should be friendly and peacemaker. He should not make jokes or laugh at the improper time or place.

II. His Obligation Towards Patients

He should avoid predicting whether a patient will live or die, only God (Allah) knows. He ought not loose his temper when his patient keeps asking questions, but should answer gently and compassionately. He should treat alike the rich and the poor, the master and the servant, the powerful and the powerless, the elite and the illiterate. God will reward him if he helps the needy. The physician should not be late for his rounds or his house calls. He should be punctual and reliable. He should not wrangle about his fees. If the patient is very ill or in an emergency, he should be thankful, no matter how much he is paid. He should not give drugs to a pregnant woman for an abortion unless necessary for the mother's health. If the physician prescribes a drug orally, he should make sure that the patient understands the name correctly, in case he would ask for the wrong drug and get worse instead of better. He should be decent towards women and should not divulge the secrets of his patients.

III. His Obligation Towards The Community

The physician should speak no evil of reputable men of the community or be critical of any one's religious belief.

IV. His Obligations Towards His Colleagues

The physician should speak well of his acquaintances and colleagues. He should not honor himself by shaming others. If another physician has been called to treat his patient, the family doctor should not criticize his colleague even if the diagnosis and the recommendations of the latter differ from his own. However, be has the obligation to explain what each point of view may lead to since his duty is to counsel the patient as best as he can. He must warn him that combining different types of therapy may be dangerous because the actions of different drugs may be incompatible and injurious.

V. His Obligations Towards His Assistants

If his subordinate does wrong, the physician should not rebuke him in front of others, but privately and cordially.

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Istanbul Maltepe Military Hospital's Pharmacy

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Summary

In 1826 by the offer of Dr. Mustafa Behçet, Sultan Mahmut the 2nd started to build a hospital. They called it "Asakir-i Mansure Hospital" and its location was in İstanbul Topkapı-Maltepe. This hospital had European qualities. In the beginning it had 600 beds then it increased to 1000 beds. The pharmacy in the hospital helped ill people to get their medicines and it also helped for the military service to get their needs.

This survey will be presented with the studies of the pharmacy and the lists of the medicines which were taken from archives.

Key words; Maltepe Military Hospital, Pharmacy, İstanbul.

Maltepe Military Hospital was built with the suggestion of Chief Physician Mustafa Behcet Efendi during the reign of Sultan Mahmut II (1-5).

The building has four facades, and there is a big courtyard in the middle. There is one floor in the front facade and the other facades have two floors. When it was first built, it had the capacity of 600 beds, but its capacity was raised to 1000 in the following years (1,6).

The building was used as a hospital until 1922, and in this year it was abolished and was not used until 1941. From this date to 1950, it was used as Maltepe Military High School. The building was deserted after the moving of Maltepe Military High School to Kuleli Military High School, and today, Maltepe Military High School, which was assigned to Police Department by National Defence Ministry in 1980, has been used by Istanbul Special Police Forces Department (Çevik Kuvvet) (7,8).

We see a lot of documents about Maltepe Military Hospital in the Ottoman Archives of Prime Ministry (9,10).

According to Some of These Sources

It is said in the third copy of Takvim-i Vekayi, printed on 20 November 1830, that 423 soldiers were taken to Maltepe Asakir-i Mansure *{God's victorious soldiers)* Hospital in September, and 366 of them recovered.

In the archive document, dated 23 September 1834 (11), we see 5 tents to accommodate the patients, and two each cauldrons for washing and cooking were demanded from the ammunition store *(Muhimmat-i Harbiye),* because it was thought that diseases of the aforesaid patients who were coming from Asakir-i Mansure to Maltepe Hospital might spread, and it was necessary to keep them away from the building and care them outside the hospital. Again, in an other archive document, dated 5 September 1834, the necessary precautions were taken on the matter of preventing contagion of the disease appeared in Yedikule Slaughterhouse, it was deemed convenient that the workers who were working in the slaughterhouse should work outside and tents and other necessary materials were given to these people.

In the archive document, dated 14 May 1837 (12), it was mentioned that the 62 officers and soldiers from Asakir-i Mansure died between the dates 9 March and 6 April 1837 in Maltepe and Sakizagaci

Hospitals, and the funeral expenses were paid by managers of the hospitals. The total cost of the funerals expenses was 1863 piastres. It is also mentioned that after 509 piastres on the corpses were taken out, the remaining 1394 piastres would be paid by the treasury of the Army. In the document, we see the names and the hometowns of the dead people, the amount of the money on them, and 27 piastres were spent for each funeral.

The Names, Cadre and Salaries of the Staff Working in that Period

The number of the patients who died in a month, patients who were on a diet or not, patients who came to the hospital and recovered, the number of the patients came from Asakir-i Mansure and their health conditions and the personnel charged in Maltepe Hospital were given in the archive document, dated 1835 (13). According to this document;

Personnel on duty
Chief Physician, Assistant Chief Physician
Imam, Secretary Specialist Physician
Assistant Surgeon, Pharmacist
Distributor, Guard
Laundryman, Personnel
Servant
Were pointed.

It was stated in the document, dated 22 October 1835 (28 Cemaziyelahir 1251) (6), that in Maltepe Hospital, where 1104 sick officers and soldiers stayed, an inspection was made, and it was seen that all the wards were in perfect condition, all the patients were asked how their health conditions were, patients' files were put for each patient, appropriate drugs were prepared according to their disease, the patients were given these drugs by personnel and patients' feet were washed with warm water every day, the personnel served them voluntarily, patients' beds were frequently changed and the clothes worn by the patients were clean, food and drinks were served to the patients who were on diet and those who were not on diet. It was pointed in the report that everything was perfect.

In addition to Maltepe Military Hospital's services of treatment, we also see that all kinds of drugs and treatment stuff of the military troops which were tied to the hospital or patients who were in the hospital were supplied by the hospital pharmacy.

In a document, dated 11 May 1837 (5 Safer 1253) (14), the sealed and signed books in which the amounts and the kinds of medical stuff were stated should be sent with an official writing to Ahmet Efendi who was assigned as a principal and chief physician to Maltepe Hospital. These books were necessary for the Asakir-i Mansure infantry regiments and cavalry regiments that went to the hospitals in Istanbul or provinces by duty, also, it was stated that the contents and compounds of the drugs which were demanded by Ahmet Efendi's examination would be prepared in Maltepe Hospital and would be given. According to the same document, the drugs which would be given to the Asakir-i Mansure regiments that were on duty in provinces and the hospitals in Istanbul would be demanded according to the seasons and numbers of the patients every month or once in three months and it is seen that some precautions were taken against overusing of drugs.

Maltepe Military Hospital Reform Studies And Pharmacy

Dr. Rigler and Dr. Eder, who were invited from Austria to make reform in military hospitals where the mortality rates were high in Istanbul in 1842 and they found out that the drugs in those hospitals and their distribution were bad. As it was understood from the article which was published in a German newspaper by Austrian Dr. Bernard there was a pharmacy in Mekteb-i Tibbiye-i Sahane in Galatasaray in 1843 and according to the regulations in those days, free drugs were distributed to the poor patients in big amounts. It is supposed that the drug store in the Medical School might be the "Pharmacie Centrale" whose name was frequently seen in the work of Bernard called "Pharmacapoea Ottomana". Dr. Bernard says a big amount of money is saved with this "Pharmacie Centrale" which meets the drug needs of all the military hospitals.

The students who were studying at the Military Medical School were needed to complete their 6-year education with a practice in pharmacy or hospital to obtain their diplomas. In this way, the student was

educated in pharmacy after a 3-year practice and according to his achievement in the examinations of Turkish and Arithmetic in French. With this diploma, he was authorised to run a pharmacy either in the hospitals of Istanbul or provinces (15).

In 1843, practical pharmacy courses started at the Military Medical School for the first time. So, with the joining of these qualified pharmacists who were examined at the Military Medical School to the military hospitals and troops the needs in this area were covered.

In 1842, Sultan Abdülmecid applied to the government of Austria and requested two physicians to be sent to Turkey. The reason of this request was to inspect the unbelievably high mortality rates in Maltepe Military Hospital. The two chief assistants who were chosen for this reason were Dr. Eder and Dr. Rigler.

These two physicians arrived in Istanbul on 14 October 1842, and on the next day they started to their duties at Maltepe Military Hospital, which was built by Sultan Mahmud in 1826.

In 1844, the Minister of Defence accepted the *Regulation of Military Hospitals,* arranged by Dr. Rigler and Dr. Eder.

On 20 January 1844, Dr. Eder died from meningitis, and two new physicians, Dr. Reinwald and Dr. Warthhicler, were appointed as assistants to Dr. Rigler.

The great achievements of Dr. Rigler in this area provided his promotion to the posts of general inspector of health and counsellor in Ministry of Defence.

Some of the military hospitals were the institutions of training for the graduates of Military Medical School at the same time. In these institutions, all the young physicians had to practice under the supervision of the clinic chiefs. Only after this training, young physicians, according to their abilities, were appointed to battalions, batteries or hospitals.

Because of the lack of place, it was impossible to increase the number of beds which had already been increased three times since Dr. Rigler came. So, between the years 1844 and 1849, a new military hospital was built with the suggestion of Dr. Rigler, and in this way, the capacity of bed was increased to 2000.

Dr. Rigler replaced the practical pharmacists in all the military hospitals with pharmacists who graduated from the Pharmacy class of the Medical School after 1840 (16,17).

Maltepe Military Hospital Pharmacy

When the personnel of Maltepe Military Hospital is examined, it is seen that there was a pharmacist.

The pharmacy which was situated in the main building behind the entrance door served in providing medicines for patients for years.

We see these services in the below mentioned documents in the Ottoman Archives of Prime Ministry.

24 November 1833 (11 Recep 1249) (18)

25 September 1834 (21 Cemaziyelevvel 1250) (19)

20 August 1835 (25 Rebiyulahir 1251) (20)

For instance, in the archive document, dated 22 March 1836 (4 Zilhicce 1251) (21), we see that Brigadier Iskender, who was in the guard of Iskodra, says that one-month needs of medical drugs of 1st and 2nd regiments cannot be enough, so he wants the necessary drugs for the aforesaid regiments to be given from Asakir-i Muntazama-i Hazret-i Sahane Pharmacy, and the compositions to be sent after they are produced in Maltepe Hospital. In this document, the lists and amounts of 80 pieces of drugs and 95 types of compounds which were produced, prepared and arranged in Maltepe Hospital are given.

Some of these are:

The list of pharmacy stuff and various drugs, and the goods which were bought monthly for organised soldiers:

LATIN	TURKISH		
	A- YAĞLAR (OILS)		
Oleum Amygdalae	Badem Yağı	24 Kıyye -	67.2 lb.s
Acide Sulfurique	Zac Yağı	120 Kıyye -	336 lb.s
Oleum Ricini	Hint yağı	33 Kıyye -	92.4 lb.s
Oleum Bergamide	Bergaman yağı	307 Kıyye -	859.6 lb.s
Adeps Suillus	Domuz yağı	147 Kıyye -	411.6 lb.s
Oleum mentahae piperitia	Nane yağı	259 Kıyye -	725.2 lb.s
Oleum Rosmarinus	Biberiye yağı	500 Kıyye -	1400 lb.s
	B- AROMATİK SULAR (AROMATIC WATER)		
Aqua Cinamomi	Tarçın Suyu	110 Kıyye -	308 lb.s
Aqua Aurantii Floris	Çiçek Suyu	39 Kıyye -	109.2 lb.s
Aqua Menthae	Nane Suyu	39 Kıyye -	109.2 lb.s
Aqua Rosae	Gül Suyu	32 Kıyye -	89.6 lb.s
Aqua Laurocerasi	Taflan Suyu	12 Kıyye -	33.6
	C- ÇİÇEKLER (FLOWERS)		
Folium Malvae	Ebe gümeci	240 Kıyye -	67.2 „
Flos Desoufre	Kükürt Çiçeği	279 Kıyye -	781.2
Convolvulus Seammonia	Çadır Çiçeği	150 Kıyye -	420
Flos Tiliae	Ihlamur Çiçeği	107 Kıyye -	299.6
	D- OTLAR (HERBS)		
Melissa Officinalis	Melissa Otu	39 Kıyye -	109.2
Coniummaculatum	Baldıran Otu	4 Kıyye -	11.2
Digitalis Purpuea	Yüksük Otu	30 Kıyye -	84
	E- EKSTRELER (EXTRACTS)		
Extractum de Cique	Baldıran Hulasası	1 Kıyye -	2.8-
Extractum Belladone	Belladon	2 Kıyye -	5.6
Semen Hyoscyami Albus	Banotu	2 Kıyye -	5.6
Fructus Rosae	Kuşburnu	50 Kıyye -	140
	F- KÖKLER (ROOTS)		
Radix Liquiritae	Meyan kökü	36 Kıyye -	100.8
Rhizoma Graminis	Ayrık	139 Kıyye -	389.2
Radix Violae	Menekşe	9 Kıyye -	25.2
Radix Heleniim	Andız Otu	139 Kıyye -	389.2
	G- TUZLAR (SALTS)		
Chlorure de Sodium	Sodyum	8 Kıyye -	22.4
Sulfur Lotum	Sublüme	8 Kıyye -	22.4
	H- ZAMKLAR (NATURAL RESINS)		
Gummi Cinchoane	Kına kına Zamkı	370 Kıyye -	1036
Gummi Arabic	Zamkı Arabi	39 Kıyye -	109.2

	K- BALMUMU (WAX)			
Wax	Balmumu	92 Kıyye	-	257.6
White Wax	Beyaz Balmumu	76 Kıyye	-	212.8
	L- TOHUM (SEED)			
Fructus Apii	Kereviz Tohumu	10 Kıyye	-	28
Semen Lini	Keten Tohumu	363 Kıyye	-	1016.4
Semen Hyoscyami	Ban Tohumu	1		
Semen Sinapsis Nigrae	Hardal Tohumu	10		
	DİGERLERİ (OTHERS)			
Vinegar	Sirke	96 Kıyye		
Rosae Vinegar	Gül Sirkesi	2 Kıyye		
Vinegar of Lead	Kurşun Sirkesi	10 Kıyye		
	Taflan yakısı	16 Kıyye		
	Frenk yakısı			

THE LIST ON 20 AUGUST 1835 (25 REBUL AHIR)

LATIN	**TURKISH**	
Radix Liquiritiae	Meyan Kökü	10 Kıyye
Ammonium Chloride	Nişadir	6 Kıyye
Sirop de Moms	Dut Şurubu	150 Kıyye
Semen Sinapsis Nigrae	Hardal Tohumu	10 Kıyye
Soufre	Kükürt	80 Kıyye
Carbonate Sodii	Soda	½ Kıyye
Sennae	Sinameki	25 Kıyye
Salvia Officinalis	Ada Çayı	1 Kıyye
Tea	Çay	2 Kıyye
Apis Mellifera	Bal Arısı	1 Sise (bottle)
Melissa	Melissa	15 Adet (pieces)
Ricinus	Hint Yağı	8 Kiyye
Oleum Olivarum	Zeytin yağı	200 Kiyye
Pimpinella Anisum	Anason	150 Dirhem (drachms)
P. Asetfenatin	Phenacetinum	20 Dirhem
Opium	Afyon	2 Kiyye
Oleum Terebentim	Terebentin yağı	1 Kıyye

Conclusion

Maltepe Military Hospital and pharmacy were built with the suggestion of Chief Physician Mustafa Behcet Efendi during the reign of Sultan Mahmut II and they provided the demand of the hospital and the troops around for many years.

In 1842, Sultan Abdulmecid gave a lot of importance to the hospital and that's why many physicians were brought from abroad.

According to the documents of Ottoman Archives of Prime Ministry nearly in all the present drugs, herbal drugs are seen and it is stated that the synthetic drugs are less.

It was pointed that herbal drugs were provided from our country and some herbal oils were brought from abroad and they were sent to the troops by bottling rather than packaging.

The toxic drugs were used a little for skin diseases and because of the abundance of herbal drugs and the scarcity of synthetic drugs, some of the formulas containing synthetic formulation that were made in pharmacy laboratories were seen in prescriptions. Nowadays, herbal originated formulas which were used in the past and are still used today are not made in pharmacies in Turkey. In the light of new discoveries, they are replaced by the formulas which contain synthetic substances. In Turkey, doctors' prescriptions that contain synthetic substances are now made in Turkey.

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Common Thoughts of Socrates and Yusuf Khass Hajib on Wisdom and Virtue

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Summary

The concern for saving the State, science and politics, and laying the foundations of each one was expressed by both Socrates and Yusuf Khass Hajib; and the solution to this problem was found in universal and ethical values.

This study aims to put forward common thoughts of Socrates and Yusuf Khass Hajib on wisdom and virtue.

Key Words; Wisdom, Virtue, Ethical Values.

Introduction

Sociologist Zimmerman argues that the world witnessed four fundamental changes in the 20th century:

1. The reduction of distances and technological progress facilitated moral cultural imperialism.
2. Social classes and the change in the criteria for evaluating these classes led to attaching more importance to intellectuals and scientists.
3. The change in control and population regions.
4. The emergence of the psychology of admiration for past civilizations. This admiration was a radical change in mentalities (1,2). As the chef d'oeuvres presented to humanity by the West and the East were better known, the meta-culture identity of Turkish culture was better understood (1).

Kutadgu Bilig (Wisdom of Royal Glory) was written by Yusuf Khass Hajib (1018-1069) in the 11th century (This work was influenced by Turkish mythology, Turkish history and culture, ancient Turkish religion and Indian, Iranian and Chinese civilizations). There are four basic concepts in Kutadgu Bilig:

Yusuf informs us at the beginning of the work (lines 353-58) that it is based on four abstract principles, each of which is represented by one of the four major characters. These are as follows:

Name	Occupation	Principle
Rising Sun (Kün Toğdı, lit."the sun has risen")	King	Justice
Full Moon (Ay Toldı, lit."the moon is full")	vizier	Fortune
Highly Praised (Ögdülmiş. Lit."praised")	sage	Intellect (or Wisdom)
Wide Awake (Odgurmış. Lit."awakened")	ascetic	Man's Last End

Each concept is represented by a person and opinions on such issues as the State, politics, society, professions and ethics are expressed during the dialogues among these people (3,4).

Not the plot or form of the book but the content of dialogues determine the importance of Kutadgu Bilig.

This study aims to reveal common thoughts of Socrates and Yusuf Khass Hajib on wisdom and virtue.

Yusuf Khass Hajib (1018-1069) and Kutadgu Bilig

Yusuf Khass Hajib is the first author of Islamic Turkish Literature (whose work reached us). He was born in the early 11th century in Balasaghun, Turkistan.

This town was among a few civilized centers of the Karakhanid period. Yusuf Khass Hajib was a well-educated scientist, philosopher and artist who was aware of the importance of wisdom and who thought and wrote well. The center of the government of the Eastern Karakhanid State was Kashgar in 1069-1070. Yusuf started writing Kutadgu Bilig in Balasaghun and completed it in Kashgar after working for eighteen months on it and presented his work to Karakhanid Sultan, Tavghach Bughra Ebu Ali Hassan bin Soleman Arslan in 1070. Kutadgu Bilig is a didactic work written in Hakaniye Turkish. The intellectual Sultan of the period acclaimed this work and awarded Yusuf with the title of *Khass Hajib* (meaning 'top adviser'). Like the style of a classical Turkish poem, the work starts with words eulogizing *Allah* and *Mohammed*. It consists of 88 chapters and 6645 couplets (4).

Various opinions are expressed on the literal meaning of the title. According to some researchers, wisdom of happiness and according to some others, wisdom that brings happiness makes people reach happiness in both Earth and Heaven. This wisdom provides human beings with the mentality, knowledge and virtues required for ideally organizing the lives of the individual, community and State which are closely related to each other. "With this work Yusuf created a system of philosophy of life which analyzes the meaning of human life and determines the task of human beings within the community and within the State".

Today there are three known copies of Kutadgu Bilig:

1. The copy in Vienna: (in Uighur alphabet) It was found in Herat in 1439. It was taken to Tokat and then to Istanbul and was donated to National Library of Vienna by Hammer, who bought it from bouquinistes in Istanbul.
2. The copy in Cairo: (in Arabic alphabet) It was found out by the German Director of a library in Cairo, Dr Moritz, in 1896.
3. The copy in Fergana: (in Arabic alphabet) It was found by Zeki Velidi Togan in Nemengah, Fergana, Turkistan.

Turkish Language Association published all three copies in 1942-1943. It was translated in 1947 by Reshit Rahmeti Arat with an annexed critical text and published in 1959, and its index was published in 1979. We used in this study the second edition of the translation of Arat and the English translation of Robert Dankoff published under the title of Wisdom of Royal Glory (Kutadgu Bilig) A Turco Islamic mirror for Princes. Our further studies will also be on these version (3,4).

Wisdom: In general wisdom is the product of the relationship between object and subject, resulting from the intentional tendency of the subject. It can be defined as being aware or conscious of something as well as a clear perception of something regarded as accuracy or a task (4).

Wisdom in Kutadgu Bilig

Kutadgu Bilig includes numerous concepts besides the four basic concepts we mentined at the beginning of this study.

Such concepts included in Kutadgu Bilig as *Biliglik* (being wise), *Kutluluk* (happiness), *Könilik* (rightness, justice), *Erdem* (virtue), *Edgü* (kindness, doing favor), *Asıglıg* (helpfulness), love, loyalty, generosity, bravery, patience and modesty are classified as ethically positive concepts whereas lying, hastiness, ignorance, meanness and greed are listed under the title of negative ethical concepts.

Yusuf Khass Hajib believes that our primary task for ourselves is seeking wisdom. Kutadgu Bilig includes the following statements on this consideration:

> *"Learn wisdom and earn the seat of honor." (K.B.line.6605)*
>
> *"Wisdom is a nighty fortress. The heart and Tongue are fitting for notting without wisdom; with wisdom they fit everything, like water."(K.B.line.6606)*
>
> *"However much wisdom you posses, still seek to gain more; for the wise man attains his desire by inquiry." (K. B. Line. 6607)*
>
> *"Learn wisdom, and become a man by rising your soul aloft; otherwise be called "beast" and remove yourself from mankind." (K.B.Line.6611)*

Yusuf Khass Hajib's abovementioned statements are of great importance since they reveal the significance of wisdom and wise men.

Since virtue is defined as the tendency to be always ethically good and engage in right actions, it is inevitable to regard virtue as a characteristic specific to human beings.

The statements in Kutadgu Bilig clearly express that wisdom makes individuals closer to perfection and guides the souls to make beneficial. This idea is parallel to Socrates expression: "Virtue is wisdom".

Socrates believes that each virtue is wisdom. An individual who is able to know what is good and right is virtuous, just and brave. The wisdom which makes an individual virtuous is the wisdom of the good (6,7). Socrates also employs good as synonymous with beautiful and useful. The acts that render life favorable and painless are beautiful, and every beautiful act is good and useful. Socrates believes that any act which does not serve for reaching a target is useless. Anything is beautiful and good because it is useful. People who are aware that there are better acts than the ones they do will never refrain from engaging in better acts. Philosophers have defined wisdom in various ways throughout the history of philosophy (8).

Wisdom is defined as follows in Kutadgu Bilig:

> *"Intellect is like a lamp in a dork night, while wisdom is light itself that has made you bright. (K.B. line. 288)*
>
> *Wisdom is like alchemy: It Accumulates wealth which is stored in its place, the intellect. (K.B. line. 310)*
>
> *Musk and Wisdom are of the same sort: Neither can be kept hidden (K.B. line. 311)*
>
> *If you try to hide musk its scent gives it away , and if you conceal wisdom,it nevertheless continious to regulate your tongue (K.B. line. 312)*
>
> *"Wisdom is a type of wealth that can not turn to poverty and can not fall pray to theft or fraud (K.B.line 313)*

Besides these definitions, the following statements are also included in Kutadgu Bilig:

> *"There are numerous differences among men, but the main source of in quality is the degree if wisdom." (K.B.line.201)*
>
> *"Since the time that Adam descended to the world it has been men of intellect who instituted law, and in every age the highest position have always gone to the wise." (K.B.line.220)*

As a criterion, value always distinguishes between what is and what should be, and is always regarded as something positive or negative. In this expression from Kutadgu Bilig (KB. Line 201) wisdom is certainly regarded as a value.

The fact that a wise man will always have a special position in the society where he lives highlights the importance attached to a wise person.

The ethical values stated by Socrates are concepts which are universally good, acceptable, permanent, valid for all conditions and times, and which do not change according to particular events. Values such as modesty, helpfulness, rightness and justice, obedience to law are among the examples of universal values which are believed to be existing by Socrates (9-11). These values are also mentioned in Kutadgu Bilig and Yusuf Khass Hajib believes that they exist potentially in the inner world of human beings. The problem is to get them out to the real world. Thus, one will reach the right, the beautiful and the good. Socrates and Yusuf Khass Hajib expressed common thoughts on the ethical values mentioned above and how to reach them.

The following statements on wisdom quoted from Kutadgu Bilig reflect ancient Turkish tradition and the value attached to wisdom:

> *"Man's heart is like a bottomless sea and wisdom is the pearl that lies at the bottom."(K.b:line.211)*
>
> *"If fails to bring the pearl up out of the sea it could just as well be a pebble as a pearl."(K.B.line.212)*

Turkish people used to compare the mind of wise people with huge seas. It was a custom to say "his mind is like an ocean" while talking about a wise and well-educated person (12).

"As long as the wise man does not bring out wisdom upon his tongue, his wisdom may lie hidden for years and shed light."(K.B.line.214)

A wise person is expected to use his wisdom for the benefit of the society. The formation of a healthy society is also important in the human model and concepts presented in Kutadgu Bilig. This is merely one of the universal values presented to all humanity by Kutadgu Bilig.

The below-mentioned statements are an evidence of the relationship between wisdom and the benefit provided by wisdom:

"The profit of wisdom is all good things with wisdom, as the proverb goes "he found the road to heaven". (K.B. line. 208)

"Then speak all your words wisely, and know that wisdom alone makes men great." (K.B.line.209)

Nobody would intentionally do something which is evil or which he knows to be evil. In fact it is against the nature of human beings to consider the evil superior to good.

Socrates is solely concerned with the following question: "How is the right life style?" he seeks for the conceptual truth only because of ethical concerns. Ethical self-development and science are the same. The universal truth to be found after researches will provide clarity and confidence on consciousness of ethics.

Ignorance categorized among negative ethical concepts in Kutadgu Bilig defined in various ways. Ignorance can be defined as not knowing or being totally or partially deprived of knowledge.

As the following statement suggests, ignorance is described as an illness:

"Wisdom proclaims its own meaning this: When a man knows wisdom, the illness is not treated the patient dies."(K.B.line.156)

"An ignorant person is always ill. If the illness is not cured, the patient will die soon."K.B.line.157)

This statement also reveals the concern stemming from ignorance.

"Go then, fool, seek remedy for your ills, and you, glorious sage, prescribe the foll's remedy!"(K.B.line.158)

Socrates suggests that wisdom orientates people to right actions whereas ignorance orientates them to the wrong. Thus a person who knows himself will engage in acts which are beneficial for him while a person who does not know himself will engage in harmful acts (13,14). Wisdom is the source of our ethical actions and ignorance is at the basis of all wrong actions (15). Wisdom is considered the source of ethical actions in Kutadgu Bilig, as well.

The following selection from Kutadgu Bilig shows the similarity between the thought of Socrates and Yusuf Khass Hajib on wisdom:

"Know that wisdom and intellect are noble things and they ennoble the chosen servant (i.e.) man."(K.B.line .152)

"Intellect is leading rein : If a man leads by it, he achives his goal and enjoys countless desires." (K.B.line.160)

"Through intellect a man rises in esteem and "wisdom he grows grest". (K.B. line. 289)

Socrates and Yusuf Khass Hajıb

Having placed himself at the centre of philosophy, man who seeks how is and how should be his relationship with himself, universe and society, and who highlight the personal, social and ethical dimension of human life is involved in a world where many other people lead a life and social values prevail.

People adopt the ideals and values of society in which they live. During this social conditioning and socialization process nearly all people are voluntarily involved in the ideals of society and lead a life striving to meet the expectations of the society. This life is qualified as "an unquestioned life" by Socrates and "an unreal life" by existentialists in the 20th century (16).

While people are leading such a life, the life is not under their own control. It is led by an external control, which makes them unhappy. Providing the soul

with the necessary care means knowing or being aware of what makes us a human being, the spirit itself and what completes and realizes the nature of a human being.

At this point we have to remember another well-known aphorism of Socrates philosophy: "Know yourself". When a person is aware of his own nature, the motifs that motivate him, his capacity and abilities and the real objective of life, he will be able to reach the final objective - which is happiness - acting wisely and reasonably in accordance with this awareness (17,18).

Socrates draws an analogy between leading an ethical and happy life and various arts and crafts in order to express more clearly the relationship between happiness and wisdom. As mentioned in many resources, Socrates believes that living is also an art. If we want to lead a good and right life, we have to regard life as an art whose final objective is happiness. The ways suggested for reaching happiness -which is the objective of life- are virtues defined as perfection which makes up the personality of human beings.

Virtue is a value or a qualification which guides human beings to reach eudemonia where they fully realize their own nature, apply all their potentials to life and reach their perfection. Socrates believes that virtue - with its abovementioned definition - is equal to wisdom. "Virtue is wisdom" is an expression which he never gave up repeating.

If virtue is wisdom, what kind of wisdom is it?

It is clear that Socrates does not regard all wisdom as virtue. The wisdom which is a virtue leads people to self-realization and happiness. Wisdom which is virtue should be good, render us good and change our life into a good one.

According to Socrates, wisdom which makes people realize their own nature and help them reach happiness is the wisdom related to the good and the evil, and what is good and what is evil.

Wisdom which is virtue belongs to a person himself. The second way of defining virtue is equalizing it to knowledge or knowing.

People cannot know what is good and bad for them unless they know who they are, what they need, which capabilities they have and do not have.

The fundamental feature of Socratic ethical philosophy is to find out method or knowledge of how to achieve universal values. Socrates does not suggest universal ethical values as a task. He wants people to find out the good and the right applying this method to their life (19,20).

Sorokin's classification of cultures as materialist, ideational and idealistic (integral) is important. Sorokin states that materialist and ideational cultures are incomplete. Idealistic cultures provide the harmony between material and ideational values. Points of view and insufficiencies of cultures which are either materialist or ideational are not reflected in Kutadgu Bilig (5).

Since mythological ages, Turkish thought has been observed to embrace the reality of life and universe with an "integrating" approach. Matters such as God/sky/earth/humanity/State laid the foundations of our culture in a society without social classes composed of people of great character who were donated with strong ethical virtues. Thus the reality of "human" and "society" which is of great importance in Turkish culture displayed the need for the existence of a fair social order. The position of the State and people, their relationship and ethical concepts must be clarified in this social order. Kutadgu Bilig includes all these functions.

The thoughts of Maturidi (A.D. 862-944), Turkish religious scholar from Semerkant, had great influences on religious and ethical life of Turkish people. The value attached to customs and Imam Maturidi's thoughts on monotheism and ethics influenced Sufists and Turks. Yusuf Khass Hajib was affected by the system of Maturidi which explained and arranged principles of Islamic religion in a reasonable and scientific way. According to the theory of ethics, the good, the evil and the beautiful are comprehended by reason.

Ethical values of Maturidi are divided into two as the ones that do not change under any circumstance and the ones that change in accordance with conditions and situations. The way he explains ethical values leads us to think that he distinguishes between absolute and relative ethical values (19).

The absoluteness and relativity of ethical values is balanced in Kutadgu Bilig.

The Socratic understanding of ethics adopted by Maturidites is observed in Kutadgu Bilig as well (20).

Human beings owe much to philosophers; however, the humanity will reach happiness when everybody adopts universally accepted thoughts rather than personal ideas.

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Some Landmarks in the History of Medicine in Istanbul (Materials, Books, Documents, Periodicals And Buildings)

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Summary

Istanbul is a city rich in materials related with medical history. Besides museum of medical history general museums harbor materials concerning medical history. Furthermore books and periodicals related with medical history which are exhibited in buildings concerned with medical history and in various libraries plus documents on Ottoman Archives In Prime Ministry cast light to those interested in this topics.

Key Words; Museum, Medical Museum, Istanbul Museums.

The great diversity of the art of medicine can be traced back to its ancient roots. Its distinguished heritage is culled in contemporary libraries, archives and museums. The material related to medicine in these venues dramatically reveal the practice of healing in different societies.

Distinguished Professor Suheyl Unver, one of the founders of the discipline of medical history and deontology in Turkey, wrote in 1938 in the introduction to his book on this topic:

> "*There is no art or science whose history is as philosophical as that of medicine. No history provides a more brilliant demonstration of the faculty of comprehension and of the human intelligence. On the other hand, the science of medical history provides the starkest comparisons of the justified pride of the human being who penetrates to the depths of nature and his mixed feelings and helplessness on the face of a number of yet unknown matters. One of the most remarkable aspects of the art of healing is the revelation of certain matters through the mediation of great minds and their connection to the human condition. Despite the publication of numerous books on medical history in every language, few of the facts are known to our physicians, while a physician ought to be aware of the difficult work of self-knowledge*." (1-3).

It may be that no adventure novel is as exciting as the adventure of science and medicine. Different instruments for centuries were modern at the time when they were made. Physicians have employed various methods of treatment, and they have made and used, but the rapid progress of science, new discoveries and technological breakthroughs has rendered them old-fashioned, antiquated or obsolete. When more practical, hygienic instruments equipped with the latest technology came into use, the old jars, mortars, microscopes, bottles, X-ray tubes, injectors and sterilization tools were sometimes discarded and sold as scrap, and they sometimes ended up in the hands of connoisseurs.

When these instruments are displayed in one venue, the stages of medical history and the current state of affairs emerge clearly. The contemplation of a surgical set from the 4th century BC made by a great master is exciting and thought-provoking (4). Elegantly gilt medicine jars from the end of the 19th and the beginning of the 20th century reflect the romanticism and the refined taste of the period.

Quaint names of manufactured pharmaceuticals like "Iodopepton Kazım", "Shokalaksin Tevfik", "Nevrozin Celal", "Nazalin Hulusi", "Fosfotin Necati" and "Teskin Fuad" make one smile and prompt a comparison with the current state of the pharmaceutical industry.

Not only instruments but also historical institutions such as "Dar-Al-Shifas and "Bimarhane" (House of Treatment and Convalescence) have their place in medical history. Instruments, buildings, manuscript, printed works and many other artifacts attest to the great diversity of medical practice. Quite a few buildings in Istanbul stand witness to this astounding wealth.

Cerrahpasha Medical Faculty, Department of Medical Ethics and History of Medicine, Museum of Medicine

Founded by Prof. Dr. Nil Sari in 1985, this constantly growing museum had to be relocated from the hall that had been designed as a museum at the Cerrahpasha Medical Faculty, Department of Medical Ethics and History of Medicine to a three-story, spacious and historic building on the same premises. Manuscripts, books and medical miniatures are displayed on the first floor of the three-story museum. The wide corridor functions as the exhibition hall for works primarily by painter-physicians as well as other painters. Old medical material related to fields such as bacteriology, biochemistry and pathology are displayed on the second floor. One of the wide halls of the third floor features pharmaceutical objects, the other, surgical instruments. Physicians' diplomas, distinctions, decorations and portraits of the more famous ones are displayed in other chambers of the same floor. The walls of the corridors and the stairway are decorated with photographs and posters related to medical history and training in the country.

The items in the museum were made of materials such as glass, wood, paper, porcelain, ceramic and cloth. Pharmaceutical objects stand out among a number of other instruments used in nursing, midwifery, dentistry and traditional medicine. The material comes mainly from the end of the 19th and the beginning of the 20th centuries. Old medicine jars and bottles marked with writings in the Arabic script with aesthetically appealing pictorial descriptions, bronze mortars from the Seljuk period, porcelain and glass mortars, corks, funnels, all kinds of glasses and large jars for storing the raw materials for drugs, as well as the glass materials and accurate scales including metal strips to weigh miniscule objects that come from some 19th century pharmacies make up a considerable part of the museum's collection. The gilt jar marked with the world "Aloe" and depicting the plant by this name is one of the favorite pieces of both connoisseurs and casual visitors. This handsome jar was donated to our Department by the "Darülaceze" (House for the Destitute), which was founded by the Ottoman Sultan Abdulhamit II in 1898 and still functions in line with its original purpose. The museum also features microscopes, surgical instruments, physicians' medicine kits, old drug packages and a number of other historical medical materials. Porcelain medicine jars from the Hamidiye Etfal Hospital, an X-ray tube from the 1920s, the set of a hairdresser-surgeon, physicians' decorations, healing ewes used in folk medicine and amulets are some of the remarkable pieces in the collection. Oil paintings and watercolors in the property of the Department are also on display in this museum.

Museum of the Istanbul Medical Faculty, Department of Medical Ethics and History of Medicine, Museum of Medicine

The instruments used during Atatürk's illness (5), a number of surgical instruments, physicians' portraits, busts, desks used by famous physicians, various tools and instruments used in folk medicine and paintings related to medical history are displayed in this museum. Some of the more remarkable pieces are the oil paintings of acclaimed physicians such as Dr. Celal Muhtar and Dr. Besim Omer Akalın by Feyhaman Duran and the reproductions by the same painter of the portraits of chief physicians Abdülhak Molla and his son Hayrullah Efendi, whose originals are kept in the Aşiyan Museum.

Topkapı Palace Museum

Among the parts of the museum that are still intact, the Concubines' Hospital in the Harem Part of the Topkapı Museum and the Başlala Tower from where the chief physician used to work are of particular relevance for medical history (6-8).

Health Museum

In this museum which no longer exists, oil paintings by Dr. Ziya Huzni and Dr. Hikmet Hamdi designed to raise popular awareness on mumps, cholera, syphilis and other diseases were on display. Informative moulages and posters on various diseases and methods of protection were among its collection (9,10).

Museum of the Istanbul University Faculty of Pharmacy

It features a number of drug containers and other materials used by pharmacists. Besides these museums which are of direct interest for medical history, general museums such as Sadberk Hanım, the Military Museum, the Archaeology Museum and the City Museum contain relevant materials.

Buildings Related to Medical History

Istanbul is very rich in buildings related to medical history. Buildings such as the Süleymaniye Dar-Al-Shifas (Ottoman Hospitals)(11) which is part of the Süleymaniye Complex and is need of restoration, the Haseki Dar-Al-Shifas (12-14) which is part of the Haseki Complex and is currently used as a Theology Specialization Center, the Toptaşı Dar-Al-Shifas (15) that is used as a school, the Sultanahmet Dar-Al-Shifas that is used as a School of Art, the Bezm-i Alem Valde Sultan Vakıf Gureba Hospital under restoration, the Gülhane Military School of Applied Medicine (16,17) which is no longer in use, the first Maternity Hospital (18) that is planned to be converted into a museum, Haydarpasha Medical School (19), the Demirkapı Military Medical School currently used as the Military Materiel Office, the old buildings of Cerrahpaşa that are still in use, the Tahaffuzhane in the Şemsipacha district of Üsküdar, the Zeynep Kamil Hospital, the Istanbul Marine Hospital, the Maltepe Military Hospital, the Haydarpaşa Military Hospital, the Gumussuyu Military Hospital (20), the French Hospital (La Paix), the Darülaceze, and a small section of the Children's Hospital (Hamidiye Etfal Hospital) the rest of which has sadly been destroyed are the landmarks of medical history in Istanbul (21).

Books, Periodicals and Documents on Medical History

The library of the Cerrahpasha Medical Faculty Department of Medical Ethics and History of Medicine has a large collection of manuscripts and printed works on medicine. The library of the Istanbul Medical Faculty, Department of Medical Ethics and History of Medicine History also contains manuscripts and printed works related to medical history. In addition, the *Gazette Medicale de Orient* in the Istanbul Medical Faculty, Department of Medical Ethics and History of Medicine contains important information on the medical history of the region. The Suleymaniye Library, one of the few in the world to hold manuscripts, has a large collection of works related to medical history. The rare books section of the Istanbul University is also very rich in works related to medical history. Relevant books may also be found at the Beyazıt Public Library, Ataturk Library and Topkapı Palace Library.

Ottoman Archival Documents contain the most extensive collection of documents on the medical history of the Ottoman Empire. Numerous documents are available to researchers under the classifications of Irade, Hatt-ı Hümayun, Cevdet and Yıldız. The archives of the Topkapı Palace Museum also contain documents related to medical history.

A large number of periodicals on our medical history can be found in libraries. In Istanbul, the Hakkı Tarık Us library contains the largest collection of periodicals related to medical history. It is followed in turn by the Atatürk Library and the Beyazıt Public Library (22).

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The Importance of Milk from the Point of Vıew of the History of Turkish Child Care and Some Scientific Results

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Summary

Milk is a very important nutritive food for children. During the history of Turkish Child Care, milk had an important place and moreover, it was used for the treatments of the diseases of children. Turkish physicians used milk both as a nutritive food and as a drug for child health.

We see many knowledge about this condition in some Turkish medical manuscripts. Milk and its products have been used for centuries in Turkey. Furthermore, yoghurt which is an important milk's product is a valuable food of Turks. Yoghurt has been used for centuries by the Turks. This product is a Turkish food.

Milk and its products are used both as a food for children and they are known as a drug in the Turkish medical folklore.

Milk has an importance from the point of view of Turkish child care. Milk is also used by Turkish doctors for the same aims, today.

Key Words; Milk, Medical Folklore, History of Medicine.

The Importance of Milk from the Poınt of View of the History of Turkish Child Care

Milk and its products have a very important place in the history of Turkish child care. In the periods of Turkish states such as Huns, Gokturks, (552-745 A.D) Uygurs, Great SelJukians, Anatolian SelJukians (the eleventh, twelfth and thirteenth centuries) and Ottomans (1299-1923), milk and its products such as yoghurt, cheese, butter had an important place in Turkish child care. Milk was an essential food of children and infants. Milk was also used in the treetment of children's diseases (4,5).

Yoghurt, butter, cheese was prepared from milk (6). Moreover, **kımız** which was an important milk's product was obtained from milk with kımız leaven. Kımız is both a drink and a drug. It was used for the treatments of some diseases such as tuberculosis, weakness etc.

Yoghurt is a Turkish food. In the period of Huns which was the most ancient Turkish state, yoghurt was prepared for the first time (1,2,3). Moreover, **Li** was prepared by mixing yoghurt and apricot or cherry. Uygur Turks used yoghurt both as a food and for the treatment of sleeplessness. Garlic and yoghurt were mixed and this mixture was given to the patient. Uygur Turks pronounced yogurt as **yorgurd, yorgut, yogrut** (7,8,9).

In the period of Karahanlılar (840-1212 A.D), **Yusuf Has Hacib** who was a valuable scholar mentioned milk and its products in his book called Divanı Lugat it-Türk (Turkish Dictionary) (1069-1073). According to this book, the most important food and drug of Turks was milk and its products. Milk was also used for the treatments of some children and infants diseases.

Abu Yusuf Ya'kup Ibn Ishak al Kindî (800-870) who was a famous Muslim physician used yoghurt for abdomen sores of infants and children. Fig, yoghurt, fat and fenugreek were mixed and this mixture was rubbed on abdomen (10).

Milk and its products were highly used by Ottoman Turks in the fourteenth century. **Ishak bin Murad** mentioned milk in his manuscript called

Edviye-i Müfrede (Simple Drugs) with the date of 1390. He stressed that milk was used for treatments of some children and infants diseases such as tuberculosis, weakness, cough etc (11). Another Turkish physician, **Esref bin Muhammed** discussed children and infants diseases in his book called **Hazâinü's Saadat** (The Treasuries of Happiness). Child care after birth, the importance of milk, ways to increase mother's milk, breast feeding methods were stressed in this book (12).

The sixteenth century physician **Nidai** mentioned children diseases in Menâfi ün Nas. For example, he wrote in this book: For children with cough, place figs in milk, let them stay for some time, than make them drink it (13).

Milk also was an important food of Ottoman Turks in the seventeenth century. A famous Turkish physician **Zeynelabidin bin Halil** pointed out the importance of milk in his book called **Sifa al-Fu'ad** (14,19).

Gevrekzade Hafız Hasan who was a famous Turkish physician of the eighteenth century pointed out the characteristics of milk.

Another Turkish physician **Dr.Besim Ömer** wrote a paper called Milk in 1899. This author used milk for the treatments of tuberculosis, Jaundice and diabetes. He stressed which milk became a useful food for children. According to **Dr.Besim Ömer**, yoghurt is a useful food for childrens' dysentery (15,16).

The first Turkish professor of paediatrics is **Dr.Salih Bey** (17). He wrote several books on paediatrics. His most important book is **Sari Çocuk Hastalıkları and Tababet-i Etfal** (Children's Diseases) (3). He pointed out the importance of milk. Moreover, **Dr.Server Kâmil Tokgöz** wrote a book called **Hıfzısıhhat (Public Health)**. He mentioned the use and characteristics of milk in this book (18).

Milk and its products were used in the kitchen of Ottoman Palace. Milk and its products can be seen in a Turkish-Primeminister-ship archives' document with the date of 1771 (20).

Today, milk is highly used in Turkey. Mother-milk is a necessary food for child-care.

The Traditional Use of Milk Among People in Turkey and its Importance From the Point of View of Modern Medicine

Milk is accepted as a necessary food of life in all the world. Modern Turkish physicians use milk for child care and diseases, today. Moreover, milk is also used for various traditional treatments of children. Salep is boilad with milk and it is administered to the child with whooping cough. Almond is powdered and is mixed with milk. This mixture is given to the child for the treatment of weakness and tuberculosis. 2 eggs is mixed with sugar and this mixture is added to a glass of wine, milk and chocolate and it is administered to the child with anemia. Black cumin is pounded and it is mixed with milk and this mixture is given to the child with whooping-cough.

Some foods with milk are also used for stomach diseases of children and their nourishment among Turkish people (21).

Result

We know milk has proteins (casein, lactalbumin and lactoglobulin), lactose, some minerals (calcium, phosphorus etc.) and vitamins (A, B_1 and B_2 etc), Therefore, milk is used for the treatments of weakness, anemia, tuberculosis, whooping-couch etc. It provides the strenghtening of bones. All these characteristics are also accepted by modern medicine (22,23,24).

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Ethical and Legal Problems with Assisted Reproduction in Turkey

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Summary

In vitro fertilization (IVF) and embryo transfer (ET) studies in Turkey are being carried out by the units of certain university and private gynecology clinics in some provinces.

Embryos developed in vitro in labs can be transferred into uterus pr, if it is not realized, can go on developing in vitro, can be used for research purposes, discharged like aborted through induced abortions or kept frozen for use later. All these applications have important medical, legal and ethical problems in them.

The aim of this study is ethical evaluation of related legislation in Turkey. The first legal regulation concerning assisted reproduction is title " Regulation on In Vitro Fertilization and Embryo Transfer Centers " is dated 21.08.1987. Certain amendment have been made since than.

According to regulation a couple's consent is a prerequisite for them to be admitted to treatment using assisted reproductive techniques (ART's). Heterological fecundation and embryo research are forbidden .

In order to keep up with such rapid advances in medical science and to get the expected benefits, further discussion in this area are needed.

Key Words; In Vitro Fertilization, Embryo Transfer, Legal and Ethical Problems, Turkey.

Introduction

Infertility necessarily means childlessness, not all childless states (voluntary or involuntary)equate with the medical disability of infertility. Some people would like to have and care for a child, but for many reasons, including personal circumstances, can not.

Reproductive medicine is technologically powerful but clinically and socially complex. Medical management aims to prevent or cure physiologically or pathologically abnormal states and thereby to minimize the suffering that disease and disability cause (1).

Defined by the World Health Organization as a complete state of physical and mental well being, health is understood as being more than the absence of disease; It includes the harmonious development of the human person. Infertility in its classic sense refers to the impossibility of reproduction in spite of unprotected sexual relations during a period of 1-2 years. This infertility affects the person mentally and physically and constitutes a medical indication allowing resource to **a**ssisted reproductive technologies.

This is the approach of most of the countries that have legislated or provided recommendations on this question (2).

Assisted reproductive technologies (ARTs)can be very helpful for certain patients, but concerns have been raised about the inherent nature of specific techniques and context in which many techniques are used. ARTs are unique among medical procedures because they aim specifically to create new individuals and family relationships. The ethics of ARTs must be understood within this social context which is often characterized by conflicts among competing interests. Physicians play important roles in support-

ing those who wish to become parents and in educating patients about impediments to fertilization and ways to promote conception (3).

We want to explain various ethical issues surrounding ARTs, family relationship, informed choice, embryo status, legal and policy issues.

In Vitro Fertilization and Embryo Transfer in Turkey

In vitro fertilization (IVF) and embryo transfers (ET)may be carried out in Turkey on conditions stated in the "**By -law Concerning Treatment Centers for Assisted Procreation** "of 19 November 1996.

In Turkey the first regulation on medically assisted procreation was the "**By-law on Centers for in vitro Fertilization and Embryo Transfer**" that was issued on 21 August 1987 in accordance with the "Governmental Decree No:181 with Having the Power of Law on Organization and Functions of the Ministry of Health and Social Assistance" of 13 December 1983 (Thereafter KHK/181). It was amended, later by the by-law dated 19 November 1996 (in Official Gazette, no. 22822 of 19 November 1996). The new by-law has renamed several concepts relating to IVF and ET. The new By-Law has named the concept of in vitro fertilization (IVF) and embryo transfer (ET) as "**Methods for Assisted Procreation** (MAP)". Moreover, the heading of the by-law of 21 August 1987 was changed as "**By -Law Concerning Treatment Centers for Assisted Procreation**".

Under by-law, treatment methods for assisting reproduction (TMAR) mean practices admitted as treatment method aiming at to bring the egg (ovum) of future mother with her husband's sperm through several methods in a suitable situation of fertilization, if necessary ex uterus, and implant gametes or embryo to the genital organs of expecting mother.

"**In vitro fertilization**" means any intervention for the purpose of formation of embryos in vitro. "**In vitro fertilization procedures**" cover, however, not only the formation of embryos, but also their maintenance in culture, their storage and transfer.(By-Law on **Treatment Centers for Assisting reproduction** ((TCAR),Art.17).

In vitro fertilization can only be carried out for **health reasons** (treatment of fertility) in Turkey.

Under by-law, "**Treatment Methods for Assisting Reproduction** (TMAR)" mean practices in modern medicine admitted as a treatment method that aims at bringing the egg (ovum) of future mother (Expecting mother) with her husband's sperm through several methods in a suitable situation for fertilization, if necessary ex utero (outside the body)and implanting gametes or embryo to the genital organs of the expecting mother (Art 4/f). According to the By-Law only **married spouses** may be permitted to benefit from treatment methods for assisted reproduction (Art 17). For the treatment, "informed and free consent" of both spouses are required. Therefore, before the IVF procedure, the persons concerned specify in **writing** their decision on the use of embryos, their storage and their destiny after the storage period (three years).According to the by-law on TCAR, a" Form of Consent"is required (Art.17) (4,5). **Table I.**

The Permission and Consent Form of the Couples Who Apply for Assisted Procreation

The patient permission form that will be applied to the couples who apply for assisted procreation:

Identity		*Female*	*Male*
Last name	:		
First name	:		
Father's name	:		
Birthplace	:		
Date of birth	:		
City	:		
Province	:		
Village	:		
Log volume	:		
House no	:		
Page of log	:		

Explanation by the doctor before practice

The medical results of the procedure of the assisted procreation, probable complications, difficulties and importance, how the embryo will be kept and the embryo will be injected in only the legal mother, practice will not be implemented unless legal permis-

sion and wish, were told to both the person who applied for assisted procreation and his/her couple.

Date: Responsible Doctor (First Name, Last Name, and Signature)

Written Statement of Consent

Before practice, we have listened all the explanations that the charged doctor made. We have been told that assisted procreation procedure would not start without our permission and consent, and we have been completely noticed about the medical consequences and probable complications. We have been noticed:

1. *About the guarantee of the procedure*
2. *That the laparoscopy and other procedures are risqué during oosit taking,*
3. *We have especially understood that probable fetal anomalies may exist and during pregnancy, there is risk in testing for searching probable anomalies. We accept that all responsibilities belong to us; we accept this procedure without any threat, violence, suggestion and oppression. We know that the frozen embryo, which belongs to us, will be kept for three years in clinics in order to be used in following months. We permit for destruction of the embryo in case, keeping period expires or one of us dies or of divorce. We promise that we will not use the probable consequences against either the hospital and the doctors. We will accept every consequence and we permit the practices related with this procedure.*

Date Female Male

This document related with assisted procreation was signed before me:

Date : Responsible Doctor:

Notice: literate people will sign it; illiterate ones will press their thumb sign.(5).

Informed Consent and Right to be Informed

Under Turkish law, every patient has the right to be informed on the nature and consequences of medical intervention before giving his consent (Act on Practice of Medicine and Its Branches, No.1219).

Medical intervention without the patient's informed consent is regarded as a trespass or assault to the patient's body. It is an infringement of the individual's "personality right" on his body and organs. Therefore lack of information and consent are grounds of medical liability (Turkish Civil Code, Art.23/II,24 and 24/a; Code of Obligations, Art 49 as amended by the Act, No. 3444 of 03 May 1998).

Before taking the consent, the patient must be given information as to the purpose and nature of intervention. Moreover the patient must be informed on the risks and consequences of the intervention.

Information must be sufficiently clear. The suitable explanation must be made, the proper terms and words must be used so that the patient can understand the purpose, nature, consequences and risk of the intervention. Individual characteristics and educational level of the patient must be taken into account when the patient is informed.

Under by-law, in case of multiple embryos, it is possible to **freeze** and **store** them with the consent of both spouses for three years. During the three years, within a period of time to be fixed by TCAR, the frozen embryos can be implemented to the same (expecting) mother with the consent of both spouses.

Under by-law, frozen embryos should be destroyed after three years (Art. 17). They can also be destroyed upon the joint request of the spouses or the death of one of them or after a divorce (Art.17).

As regards the right of parents on "**embryo in vitro**", our explanation on "**embryo in vivo**" above are valid. Likewise, neither an expecting mother nor an expecting father does have a "property right" on "**frozen embryos**". Frozen embryos cannot be sold However, they can be subject of a research upon the consent of both spouses.

An intervention on the human embryo and fetus may only be carried out after the **informed consent and free consents of the concerned persons** are obtained.

The persons are concerned who consented to donate embryos can **withdraw**

Their consent so long as the embryos have not been transferred.

The human embryo and fetus should be treated in conditions appropriate to "**human dignity**". Therefore, the number of embryos formed in vitro may not be higher than that which ensures a good chance of a successful treatment.

In Turkey TMAR can be carry out only by "special centers assisting production (owned by persons or Public Law on Private law entities)upon permit of the Ministry of Health and under the supervision of the scientific committee for TMAR.

It is not permitted practicing, using, selling, or transferring the embryos- converted from the eggs and sperms taken from the candidates that were to receive IVF and ET treatment- or the ones from non-candidates, for other candidates. It is not allowed to transfer the embryos to the people who are not allowed by law article 17. (6).

Legal Protection of Embryo and Foetus in Turkey

The ethical and legal status of human embryos has long been a core ethical concern in ARTs. The range of legal definitions include embryos as a person, embryos as a property or object and embryos as a unique category (3).

Under the **Turkish Constitution** of 7 November 1982 "**everyone"** has the "**right to life**" and the right to protect his material and spiritual entity(Art 17/1).

The term" everyone "comprises all "human beings". It is not certain, however, whether this term includes "embryo and foetus". In our opinion, it can be argued that the term "everyone" includes also embryo and foetus, for the "capacity to right "is acquired at the moment of conception provided that the child is born alive under the **Turkish Civil Code** (Art.28/II9).

Besides the constitutional guarantees, the **Turkish Civil Code** provides also legal protection for "embryo and foetus" in several fields of civil law (e.g.law of person, family law, inheritance law)

Morover the "unborn child" is protected by the **Turkish Penal Code** against criminal conduct with regard to "miscarriage " and termination of pregnancy".

In spıte of several primary (e. g., Turkish Civil Code, Turkish Penal Code, Law on Family Population Planning, No.2827) and secondary legal norms concerning "embryo and foetus" (e.g. Regulation on Performance and Supervision of Abortion and Sterilization Services, No.510; By-Law on Treatment Centers for Assisting Reproduction etc.) a specific law for the direct protection of embryo and fetus like the German "Embryonenschutzgesetz" does not exist in Turkey.

According to the **Oviedo Convention,** "assisted reproduction "or use of techniques of medically assisted procreation shall not be allowed for the purpose of choosing a future child 's sex, except where serious hereditary sex -related disease is to be avoided.

Turkey has signed the **Oviedo Convention** and the **Additional Protocol the Convention on Prohibition of Cloning Human Beings.** However, both texts have not been yet ratified.(4).

Protection of Embryo

"Embryo in vitro" means embryo formed outside a woman's body.

Protection of human "embryo in vitro "with regard to fertilization procedures, and to researches is of great importance . Human embryos or foetus cannot be subject to any "**property rights**". They cannot be subject to marketing and financial gain.

Persons who give **consent** to donation of gametes (gamete donors)for formation of embryo in vitro must be informed on the use of their gametes. The gamete donors can withdraw their consent so long as their gametes have not been used.

Research on Embryo in Vitro

The main objectives of research on embryo in vitro are to increase knowledge of the causes of infertility and to promote progress in the treatment of infertility; to develop therapeutic procedures to benefit to embryos and to increase the "knowledge of human development".

Research on human embryo and fetuses,diagnostic or therapeutic interventions with them should be under conditions appropriate to human dignity.

In our country research on embryo in vitro and on "embryo or fetus in vivo " are rather rare. Such researches can be carried out in accordance with general rules (ie. Regulation on Medical Deontology, Rules of Ethics, Approval of the Ethics Committees). In our view, specific regulation is needed in this field. The solution in additional protocols to Oviedo Convention on Biomedical Research and Protection of Human Embryo and foetus can guide future legislative developments in Turkey in these rather sensitive areas.

Conclusion and Suggestions

ART clinics have so far provided services selectively, using both resource considerations and ethical guidelines to decide, which patients are eligible for treatment .The ethical guidelines vary from country to country and sometimes from clinic to clinic.

Generally, clinics consider each applicant or an individual basis. The ethical issues raised in individual cases can be complex and questions about social values are inescapaple (7).

Even though it is not the only purpose of marriage to have child/children, having child/children is an important factor starting a marriage and continuing it especially in Turkey. As long as being unable to conceive is a cause of divorce, assisted procreation will always be on the agenda.

In attempts related with reproductive health, beside respect for the individual, and the individual freedom, the child and its future should also be cared for.

Marital Status

In most countries, ARTs, are supposed to be carried out only on heterosexual couples, either married or in a stable relationship (8).

Heterologous fertilization is not allowed in Turkey. Only the homologue fertilization between a man and a woman is allowed. There are legal regulations related with this subject.

The children, who are the result of a sperm, or an oocyte, an embryo transferring, may have more than one parent. This causes turmoil in defining their ancestors. Because there is not a special regulation on this subject in our law, the related cases are tried to be solved by Civil Codes. According to the 241st article of the Civil Code, children born in a marriage have actual ancestors. But determining the ancestors of children born out of marriage as is the cause with a sperm an oocyte or an embryo transferring etc. are very difficult. These practices force the limits of the regulations that the Civil Code determined related with ancestry.

Assisted Reproductive Technology (Art) and the Number of Embryos to be Transferred

As it is known multiple embryos developed at IVF. There is no limit for the embryos that will be inserted to the uterus.

While using more than one embryo increase the chance of the pregnancy, less embryo transfer lessen the risk of multiple pregnancy. Two or three embryo transfer (but not more than three) is directly related with the prognosis of the IVF pregnancy.

Doctors should give information to the patients about multiple embryo transfers. And they should be sure that the patients understand this information fully. Decisions of the patients should reflect their own preferences (9).

Donation of the Gametes and Embryos

Trading with human gametes, embryos and pregnancy has raised widespread ethical problems throughout the world.

The use of donor eggs, sperm or embryos is more of a societal cultural problem than medical. Among the nations with legislation, Austria, Egypt, Norway, Saudi Arabia and Turkey prohibit use of donor eggs (8).

In our country, donation of the oocytes, sperm and embryo is not permitted.

Micromanupulation

Micromanipulation includes ICSI, assisted hatching and other types (ctoplasmic transfer and nuclear transfer). For practical purposes, the principles emphasis is on ICSI.

Micro-insemination is allowed in Turkey only in relation with assisted procreation techniques.

Cryopreservation

Cryopreservation, like the use of extraconjugal gametes, can be controversial, especially, if there is opposition by a religious authority. It is interesting that many moral theologians have been concerned only about the loss of preembryos during the cryopreservation process.İf cryopreservation were 100% efficient, i.e., all preembryos frozen could, when thawed,survive, these scholars believe that cryopreservation would not be consider ethically objectionable because it preserves individual human life (10).

Cryopreservation is not allowed for oocyte and sperm in Turkey. It is very difficult and expensive collecting ovum from the candidate mother. This necessitates hormonal and medical treatment for a while. Superovulation treatment, egg collection and embryo transfer may have their complications at times and transferring them in a time proper for the cycle . will increase the success rates of the method (11).

Embryo Researches

Embryo research yields very useful results in measuring the fertilizing capacity of sperm for infertile couples and testing whether any genetic defects exist . This is especially important our country where intermarriage of close family members is not uncommon.

Patient in affluent countries expect universal health care from birth to death, effective treatment by skilled doctors and access to a doctor at any time.

Such assumptions do not necessarily equate with rights, but increasingly patients perceive such health delivery as a right

Techniques to overcome infertility, their costs and putting these techniques in national health programs are very important subjects. Infertility is not accepted as an illness in many countries. But it should not be forgotten that it requires medical assistance.

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Patient's Rights in Turkey

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Summary

Although the subject of patient rights has risen higher on the agenda worldwide for the last 20 years, unfortunately in Turkey it has only been discussed in relation to physician errors. The scope and contents of patient rights have been established with national and international documents and with the World Physicians Association Patients Rights Declaration (Lisbon, Bali and Amsterdam Declarations) for all nations in the world. While previously patient rights were protected only by standards of medical ethics they have now been enshrined in legal regulations. Many countries have begun to complete their own legal regulations. The Turkish Physicians Association and patient rights groups have come together with interested public agencies to support the development of these legal regulations. The Health Ministry of the Turkish Republic published the Patient's Bill of Rights in 1998.

Key Words; Patient Rights, Legal Regulations, Medical Ethics.

Introduction

Health policies and the institutionalization of health in countries throughout history have taken the form of political and economic conditions of societies, social structures, value systems, and social change and needs in health conditions. Turkish health policy and its institutionalization, however, have arisen as a component of the social government understanding. Health care services, that are a basic indicator of social and economic development in Turkey as in the rest of the world, continue to gain in importance. The duty for meeting requests for health care services in Turkey and ensuring that everyone can live in a healthy and balanced environment and can benefit equally and in the best manner from health care services was made a responsibility of the government in the constitution and the planning and running of health care facilities was provided for by the government alone. Although the health care sector management has many administrative centers, most of the activities occur in public institutions and the Health Ministry has the largest part in the providing for and financing of services in the sector. Social Insurance Institute General Directorate and National Defense Ministry follow this. This structure is excessively bureaucratic and creates a fragmented management style with the result being a lack of coordination between institutions (1,2).

It is well known that the health care system is constantly changing. Since the founding of the Republic, health and health care services have been given priority in the government and effort has been made in every term to improve health care services and the health care system. However inspite of all the effort and work that have been done the health care services have still not come up to the desired place. The health care services in Turkey show important variety both in service supply and service demand. While primary and secondary health care services are provided by different institutions in the private and public sectors, individuals that make up the society as recipients of service are divided into two parts, those who have health insurance and those who do not.

It is possible to say that the problem of poverty reaching terrible dimensions together with globalization effects patient rights that have come to be known as "third generation human rights." Social and economic rights together with patient rights are being abused throughout the world in both normative regu-

lations and in efforts directed at protecting basic rights. According to the results of factual studies regarding social and economic rights, the injustice in distribution of income has reached nonsensical proportions. Poverty is the primary reason for the abuse of human rights in the world. The goal "health for all" in the year 2000 was proposed to government leaders by international institutions. Whatever there is there has not been any clear improvement on this subject. The role of the private sector in the health area is continuing to increase and the subjects of "equity" and "allocation of resources" are being argued about even more (2-4).

Patient rights issue is one of the issues which is relatively known less in our country and it is often recalled when speculative physician faults that cause death or disability occur. In the last few years in Turkey the subject of patient rights has become an increasingly common topic of discussion, raising a series of shared concerns. First is the increasing role of the free market, with its emphasis on making a profit from health services. The excesses of the market often fail to respect humanitarian values in health services. Patients find that they are treated with scant respect, and remedies (including legal ones) are ineffective. The result is that those who need health services fail to use health care facilities and rendered powerless. There is a widespread agreement about the need to strengthen and protect the rights of patients in their interactions with health professionals as well as to help patients take a more active role in health care, informing patients about their rights when accessing health services. Arising from these discussions, it has become clear that existing ethical sanctions are inadequate and need to be replaced with legal sanctions (1-4).

A Patient's Bill of Rights

This bill, which reflects basic human rights in the health care arena and is accepted at the basis of the Constitution of the Turkish Republic and in other regulations and international legal texts, and which shows patient rights in a tangible manner and includes all institutions and establishments that give health services or in which health care is given, was prepared for the purpose of preparing methods and principles that would provide for everyone to be able to assume their rights as patients, to be protected from rights abuses, and, when necessary, to be able to actually use legal methods for protection, in a way that considers human dignity (4).

In the new law, patient rights are defined as "the rights of individuals who have a need for health care services, which are guaranteed to all because they are a person under the Constitution of the Turkish Republic, international treaties, laws and other regulations (4,5).

The principles that must be complied with in offering health care services have been defined. According to the bylaws they are the following (5):

- The most basic human right which is the right to life in the best condition possible from physical, psychological and social aspects is continually taken into consideration at every phase of care.
- Everyone is endowed with the right to life, and for protection and development physically and spiritually and no recourse or person has the authority to knowingly deny these rights in the humane treatment of patients.
- In providing health care services, no distinction is made because of the patient's race, language, religion and creed, sex, political opinion, philosophic beliefs and economic and social situation. Health services are organized so that everyone has easy access.
- Other than situations of medical necessity and situations specified in the laws an individual who is not willing has the right to not be touched anywhere on the body and other personal rights.
- An individual cannot be used as a research subject without voluntary permission from the individual and the Ministry.
- Other than medical necessity and situations allowed by law, a patient's private life and family life must be kept confidential (5).

The primary reason for patient rights to be discussed in our country are physician errors, for this reason they are not evaluated realistically. However patient rights are rights in which the patient and providers of health care are not in conflict with the

receivers but where it is necessary for both sides to take ownership. This understanding has not been adequately developed in our country, patients generally develop "seeking rights behavior" when there is a medical error. The legal basis for patient rights in our country is quite old, the basic text on this subject is in the 1961 dated Medical Ethics Code. The Patients Bill of Rights which was published in the official gazete and became valid on August 1, 1998, is a more recent step taken on the subject of patient rights. In the last section of these bylaws a place was provided to explain the legal ramifications of situations where patient rights are violated. Work towards effective supervision mechanisms, clear policies for patients to be able to easily seek their rights, provision of information to patients and their next of kin about rights, continuing education to provide health care personnel professional information and skills, technical support and internal supervision mechanisms on this subject all need to be established (5,6).

The Development of Patient's Rights in Turkey

Attention to patient's rights is very new in Turkey. The first and only organization for the protection of patient's rights, (Organization of Patients' and Patients' Relatives' Rights) was established in 1997. This is a citizens' group that works to raise popular awareness about this issue among patients and their relatives. In addition the Turkish Bioethics Association has been working since its foundation in 1995 to promote this issue. The participation of the Turkish Physicians Association in this process has been very important.

The Need for Greater Emphasis on Patient's Rights

Regrettably, the "right to life" and the "right to a healthy life" are not ensured for all Turkish citizens. The majority is not satisfied with the ability of the health care system to protect their health or their experience when using it. Individuals frequently find that their rights are ignored. One reason is the intrinsic weakness of the health care system. However an important factor is insufficient knowledge about rights by individual patients and health care professionals.

Almost everyone who seeks health care at either public or private health care institutions complains about and criticizes the care they receive at these institutions and is revolting against the deficiencies. With every passing day the government who has been endowed with the duty to carry out many articles in the Constitution that deal with physical and emotional health for all and enacts distant health policies to accomplish this while accepting painful truths without a sound and blaming fate for the problems that are experienced is finding it more and more difficult to just condone them.

In Turkey the health care system involves a set of relationships between the government, patients and health care personnel. Yet, when patient's rights are mentioned, the government is removed from the equation so that staff and patients must confront the issue. The failure by the government to establish and maintain basic health care services is an important factor in hindering patients from obtaining their rights (1,3).

Basic Health Standards in Turkey

The size of the problem can be seen from a review of basic health outcomes in Turkey, where deaths in childhood and infancy are much higher than in the rest of Europe, and worse than might be expected from Turkey's level of economic development. The Turkish health care system has failed to rise to this challenge. Patient's rights cannot be seen in isolation. It is difficult to tell physicians to observe the rights of patients when they have had their own personal rights abused, when specialty training has been shortened and when they face economic difficulties (1-4).

The Child Death Rate in Turkey is 47 per 1000. The same rate varies between 5 and 10 per 1000 in other European countries. When Turkey is compared with other countries at the same national income level the child death rate is not 47 per 1000 but at the highest is 30 per 1000. The poor performance is evaluated by UNICEF as a difference of -17 points. That means that from the viewpoint of Turkey's health indicator a poor performance is exhibited among countries. The reason for a poor performance however results from a cumbersome management structure that is not in the correct form to be able to be utilized for national income even. Examples of these poor

indicators go on for pages. By making serious corrections in the health care system that need to be done and by examining the laws related primarily to poor indicators and on the subject of patient rights, it is being put in order again.

In addition to protecting patient rights from the point of view in our country there is another important subject that is the necessity to protect the rights of health care workers. It is difficult to tell physicians to observe the rights of patients when the physicians have had their own personal rights abused, when the required service after graduation and specialty training has been shortened and when they are in economic difficulties. Physicians, who are condemned to work for an average $500 a month, are forced to work part-time and open physician offices in addition to their government jobs. The majority of physicians turn to outside work. In addition working part time is one of the important factors for the development of a decrease in the quality of service provided in public institutions and in undesirable relationships between physicians' offices and public institutions. This situation brings about failure to institute and abuse of many articles in the "patient's bill of rights" in many health care facilities (7,8).

Basic Patient Rights in the Patient's Bill of Rights

The Right to Medical Care

In Turkey the right to medical care is protected in the constitution and can be summarized as "Everyone has the right to medical care without discrimination. The 17th article of the Constitution of the Turkish Republic states that "everyone has the right to life". In the 3rd section and 56th article of the constitution with the heading social and economic rights and duties, a detailed policy related to health rights is presented. The government is designed to single-handedly plan health care institutions for the purpose of ensuring physical and emotional health in everyone's life and achieving cooperation in the giving of health care. Although it is good that the right to health care is protected in the constitution, it is important to note that only 30% of the Turkish population is covered by social security (7-9).

The right to health care must also be seen in the light of the regional and social inequalities in access to health care services. These inequalities have increased in the last 10 years under the influence of the free market. An important obstacle to achieving the right to health is the non-functioning of public institutions, in particular the Social Security Institution, with even those who have social security being forced to seek health care (7,9).

The Right to be Informed

At the beginning of patient rights is **the right to be informed** which is defined as "patients are completely informed about the medical realities of their condition, every recommended treatment's potential risks and benefits, alternatives to the recommended treatment, diagnosis and prognosis" and it is necessary for physicians to set aside sufficient time with their patients to fulfill this right. When one considers that 5-10 minutes are allowed for patient examination in the majority of health care institutions in our country it can be said that this right is abused in almost every examination. Although physicians are responsible to their patients, it is the health care service understanding which forces physicians to work in conditions like this, which is the real abuser of patient rights (4,5).

The short duration of consultations in most facilities means that few patients are adequately informed about the choices they face. Although physicians must take some responsibility, it is the health service that forces physicians to work in these conditions that is the real abuser of patient rights. In addition to the right to be informed, rights such as ensuring confidentiality and respect for patient's privacy are frequently abused. Yet there are insufficient mechanisms to seek patient rights or to complain. Patients and their families are powerless and are resigned to the problems they face (5,8).

Access to medical records

The 16th Article of the Patient's Bill of Rights states that "The patient may examine papers and records that contain information about his/her health condition directly or by means of a proxy or legal representative and may make a copy. These records

can be only be seen by those who are directly related to the patient's care (5).

Respect for Privacy and Private Life

Article 21 of the Patient's Bill of Rights is based on patient confidentiality and showing respect for patient's confidentiality (5).

Complaint Mechanism for Patients

The people who bear responsibility for this process are clarified in the Patient's Bill of Rights. The 8th Section of the By laws is related to responsibility and methods of legal protection. Article 42 says "Patients and those with patients have the right to recourse, complaint, and lawsuits within the framework of the regulation in the event of an abuse of patient rights" (5).

Reasons for Abuse of Patient Rights

If it is accepted that the Patients Bill of Rights is a development in our country patients are not aware of the legislation that is in place or their rights. Because of the conditions produced in health care services in our country the abuse of patient rights is frequently experienced, however that is not reflected to the same degree in related positions. When the reasons for patient rights abuses are examined these reasons can be divided under three headings:

1. Patient-Related Reasons

The main reason for patient related causes of patient rights abuses is the patients' not knowing about their rights. There are many regulations related to patient rights in legal regulations related to health and about how to behave with patients in the contents of ethics regulations however organizing these regulations in a new understanding and bringing them to the forefront is new.

The creation of the new concept of patient rights leads to a knowledge deficit in society about this subject. Patients not only have a knowledge deficit but they also do not know what they can request from health care institutions and personnel. They do not know what authority to notify when they are dissatisfied with health care and how it will get resolved. There is little information about what they can do to make legal complaint about malpractice and medical treatment that has harmed their health and about compensation that can be made for damages and they have little hope of achieving a positive result at the end of the process.

In addition the traditional feelings of respect and gratitude to the physician and health care institution effect patients' behavior. In fact it is an illusion for many patients to evaluate the quality of the health care that they were able to reach with countless difficulties. This situation creates an obstacle to a societal consciousness on the subject both of patient rights and of precautions that can be taken in the face of medical malpractice. The understanding that the difficulties that come to patients are fate and resignation to whatever is faced are also common attitudes.

2. Health Care Institution and Health Care Personnel-Related Reasons

The reasons related to the health care institution and health care personnel can be classified by different viewpoints. The patient rights abuses by health care personnel can be classified by the "intention" view in this way (10):

- Patient care abuses that occur because of patient overload,
- Patient care abuses that occur because of a knowledge deficit in the personnel,
- Patient care abuses that occur because of errors,
- Patient care abuses that occur deliberately.

When the health care institution and personnel are considered together it is possible to classify them in this way (10):

- Patient intensity,
- Inadequacy of the health care institution's physical capacity,
- Insufficient health care personnel,
- Patient overload,
- Off-shift work systems,
- Patient transfer procedure systems,

- Not attaining the patient centered health care understanding,
- Inadequate technology

During the process of benefitting from the health care system, for patients to be able to receive care from health care institutions they must follow a very confusing path. In particular if their problem is not resolved in a primary care institution they must be transferred by that institution to a secondary care institution. This is called the transfer system. However this transfer system is not functioning in our country. Patients with problems that could be solved in health clinics are being transferred to a hospital, even to a teaching and research hospital, this situation is a reason for the increase in patient intensity in these receiving hospitals. Patient intensity makes it difficult to give care in the manner clarified in the patients' bill of rights, it opens the door to abuse. As an example, a clinic physician who should examine 20 patients in a day is forced to see 50 patients which creates a long line of patients at the examining room door. In fact patients who are ill and who should at least be sitting are forced to stand waiting for hours and the patient's right to receive health care in the minimal care that is stated in the patients bill of rights is abused. The physician, to be able to see all the patients, is forced to limit time spent and interest shown by listening, thoroughly examining patients, giving information, protecting confidentiality, and explaining medications to be used. All of these problems create an environment that abuses many rights such as patient receiving effective health care, informing about institution, personnel and illness, giving informed consent, and protecting confidentiality. It is possible to give many examples, in the current physical-technical-infrastructure conditions it is not possible to achieve "a patient-centered health care understanding" that is stated in the patients' bill of rights (10,11).

3. Health Care System and Financing-Related Reasons

The health care system and health expenses financing system are basic characteristics of how health care will be given. Institutions that give health care in our country are the Health Ministry, National Defense Ministry, Universities and Social Insurance Institution Hospitals. There is no general health insurance. There are four different public insurance systems including Social Security Organization for Artisans, Craftsmen, Tradesmen and other self-employed workers, Social Insurance Institution, Retirement fund for civil servants and "green card" (looks like Medicare) for the indigent. Again 30% of the population has no health care insurance. The structure and financing of all of these insurance plans are different. In fact the Social Insurance Institution both finances and gives health care. The result of all of this is (10,11):

- Patients' physician and health care institution choices are limited,
- An increase in patient intensity in health care institutions,
- Limiting of possibility of being able to benefit from health care institutions,
- Not being able to receive health care even when many people have a need for it,
- Increase in wasting of resources,
- Going to private physician offices and giving "knife money" (bribes),
- Patients being held hostage at hospitals.

Conclusion

For patients to be able to easily access quality health care services when needed and to be able to regain their health, patient rights, that define the form that ensures that every kind of support is attainable in a way that respects people, are without doubt the basic foundation for the right to healthy living. The health care that will be given to patients with compassion, respect, and interest like it was accepted in the past is not a favor or donation. The support that physicians or other health care workers give to patients is under the protection of national regulations and international agreements which is clearly defined in patient rights. This is a duty, a legal obligation.

Although there has been an increase in interest about the subject of patient's rights in Turkey there remain important problems in protecting patient's rights in health service. Although there is sensitivity

among the general public about patient's rights, patients do not demand their legal rights. The physicians and the patients should not be considered as two groups that are opposite to each other, but they should be thought as groups fight for common interests. This message is tried to be given to the community by medical ethicists, however, the media news, which are negative in nature and resulting in getting physicians oppose to patients, are happening to be more popular. The batch of problems is getting bigger every day, and the unsolvable nature of the matter makes us hopeless (2-4).

There are many problems in the health sector in Turkey today, starting with inadequate financing, failure to use productive and effective resources, unbalanced distribution of employees and health manpower among regions and problems of inadequate coordination and cooperation between institutions and lack of a national health policy. Although the health sector in Turkey has a management with many administrative centers, most of the activities are seen in public institutions and the Health Ministry has the largest part in the providing for and financing of services in the sector. This structure is excessively bureaucratic and creates a fragmented management style and makes coordination between institutions difficult. This lack of coordination in the health sector also leads to gaps in service. If the health care system is managed by doctors and other administrators who have been educated about management that has a democratic and participative structure and if public support and participation is ensured, the portion given to health is increased and importance is given to preventive medicine, Turkey's health indicators will improve (12).

There is an important difference between the health indicators for Turkey, which is a candidate for full membership in the European Union, and European Union countries. To decrease these differences and increase the effectiveness and productivity in health services it is necessary to increase the portion of national income for health, to use this effectively and productively, to ensure cooperation and coordination in the sector, to bring about a balance in the distribution of personnel who are employed, and most importantly, as soon as possible to create a national health policy (12).

In 2003 Turkey, as with the rest of the world, faces major social, political and economic upheavals. In particular, Turkish citizens face increasing barriers to obtaining care. This is not a good time to promote patients' rights. Patient's rights are one of the most important of the components of health rights that we believe is the fulfillment of basic human rights. It is the duty of every health care worker and medical ethicist in our country to know these rights, request them, and take care to observe, defend and protect them in practice.

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Pharmaceutical Industry in Turkey[1]

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Summary

During the Ottoman period drugs were prepared by physicians. In the beginning of the 19th century drugs started to be prepared in pharmacies called "saydalan" and "ispençiyar". Official pharmaceutical education was assumed to start in Turkey with the "Eczane Sınıfı" (pharmaceutical class) in "Mekteb-i Tıbbiye-i Şahane" (The Royal School of Medicine).

Two kinds of drug preparations were on sale at the pharmacies in Istanbul.
1. Foreign Medical preparations
2. Local Medical preparations

Local drug production can be studied in 4 periods.
1. The pharmacy period
2. The laboratory period
3. The factory period
4. The active drug matter production period

By 2003 there exist 85 drug producers, 11 raw material producers, 38 importers, totaling to 134 firms. With a product variety up to 4000 kinds amounting to a capacity of TL 50 trillion, Turkey exports preparations and active drug matter up to 50 countries.

Key words; Drug, Preparation, Industry.

During the early Ottoman period drugs were generally prepared by physicians. Rooms called "Hekim Dükkanı" (Physician's Store) functioned as drugs preparatory locations as well as treatment centers. In the following years the duty to prepare drugs were substantially overtaken by pharmacists known as "Saydalan" or "İspençiyar", which is a piece of information revealed from the court registrations dated August 1467 in Bursa.

The official pharmaceutical education in Turkey is assumed to begin with the "Eczacı Sınıfı" (Class of Pharmacists) at "Mekteb-i Tıbbiye-i Adliye-i Şahane" (The Royal School of Medicine) (1).

The renowned chemists teacher of The School of Medicine, Antonnia Kalleja, indicated in one of his writings that at the time there were two kinds of drug preparations in Istanbul, *Tiryak* and *Oğulotu*.

With widely use and increasing importance of medical preparations among physicians, pharmacists and the public, new drug compounds were prepared in "İngiliz Eczanesi" (the English Pharmacy) laboratories launched by Kanzuk and these were put on the market.

As of the launch of local drugs, patients were given two options for drugs to choose from:

1. Foreign Medical Preparations
2. Local Medical Preparations: The first apothecary preparations of the Ottoman period were prepared by owners of big pharmacies like *Büyük Eczane*, *İngiliz Eczanesi*, *Avusturya* and *Macar Eczanesi* and *Büyük Paris Eczanesi,* which were owned by Christian pharmacists.

Among Muslim pharmacists Hacı Hamdi Bey is the first to have prepared the first drug compounds. In the pharmacy he opened in the *Zeyrek Yokuşu* in

[1] This paper was presented as an oral presentation at the 38th International Medical History Congress in Istanbul

1880, he contributed to public health with the drugs he named "**Kola Hamdi, Elixir Digestif Hamdi, Kefir**".

As a good example, he was followed by pharmacists such as Abdi İbrahim, Ethem Pertev, Beşir Kemal, Hasan Rauf and Mustafa Nevzat (2).

Ready drug preparation can be divided into four periods:

1. Pharmacy period
2. Laboratory period
3. Factory period
4. Drug active matter production period

1- Pharmacy Period

The first local drug preparations, formulated either in pharmacy laboratories or small workshops during the "Pharmacy period" covering the period between 1833 and 1927, were prepared as mere imitations of imported and high-selling drug preparations. After a while the commonly used formulas by the renowned physicians of the time were prepared at pharmacies and presented to patients.

2- Laboratory Period

The number of local drug preparations in Turkey in 1930 was about 300, most of which were prepared at pharmacies while 20 of them at laboratories. What brought the end of small local pharmacies were "**The Foreign Capital Incentive Law**" enforced in 1954 paving the way for giant foreign pharmaceutical companies to come to our country to establish drug production factories, which coupled with the enforcement of "**The Pharmacies and Medical Preparations Laboratories Regulations**" dated 1954, which brought heavy financial responsibilities to the companies in question when they established factories and production facilities. Furthermore, the law required the allocation of a separate building for drug production. The mentioned points were mainly legislated with the entrance of foreign companies to the market, but caused some small initiatives to get out of business and others to merge with foreign companies, thus maintaining their existence.

3- Factory Period

Fabricated drug production in Turkey started in 1952 with the establishment of "**Eczacıbaşı İlaç Fabrikası**" (Eczacıbasi Pharmaceutical Factory) in Levent, Istanbul. With the requirement of regulations, many small local companies moved into their separate facilities, which they built with great effort, undertaking great financial difficulties, renewing their techniques and merging with foreign companies, thus keeping pace with the latest trend, that is, serial production. As a result of these developments, the "all-local" pharmaceutical preparations formulized by Turkish pharmacists were gradually left aside and foreign preparations were started to be produced (**Abdi İbrahim**, **Eczacıbaşı, İbrahim Ethem, Fako, Mustafa Nevzat**). While local firms maintained producing foreign products under license agreements, some foreign-based firms (**Roche, Bayer, Sandoz etc.**) started to produce at their own facilities. Harmonizing the accumulation of knowledge and experience gathered during the previous pharmacy-laboratory periods, the Turkish pharmaceutical industry, especially as of 1990, managed to improve itself by keeping pace with the latest technology and world standards. In 2002 the Turkish pharmaceutical industry increased its capacity to satisfy 90 % of the domestic market, besides realizing exports. The golden period of the Turkish pharmaceutical sector started with the foundation of the Employer's Union of Pharmaceutical Industry in 1964, aiming at moving in unison to be successful at world standards (3).

Today, 134 companies operate in the Turkish pharmaceutical industry;

- 85 pharmaceutical manufacturers
- 11 raw material manufacturers
- 38 importers

8 out of 35 companies operating with foreign capital have their own production facilities in our country. The others put their products in the market either through importing or fason production (4). If the geographic distribution in the pharmaceutical sector is studied, it will be obvious that due to various factors such as the existence of a convenient infrastructure,

packing equipment, qualified technical personnel, transportation and communication means, and the density of health institutions in the Marmara Region caused most of the big pharmaceutical companies to establish their factories in **İstanbul, Kocaeli** and **Tekirdağ**.

Employment

While in 1995 the number of employees working in the pharmaceutical sector was 12.634, the figure rose 38%, amounting to 17.440 employees in 1999. Due to its requirements, the pharmaceutical industry employs the most qualified, university graduate employees in the market. The rate in 1999 rose 46%.

Employment Figures in the Pharmaceutical Sector (5)

Branches	Number of Employees
Pharmacist	620
Chemical Engineer	740
Chemist	565
Physician	299
Biologist	758
Other Engineers	866
Economist	727
Other University Graduate Personnel	3,581
Managerial Personnel	3,567
Technician	643
Laboratory Assistant	273
Qualified Personnel	1,854
Unqualified Personnel	2,946
Total	17,440 (4)

firms. Today only one firm with foreign capital operates in the market.

There was a substantial decrease in production level between 1995-2000. Following the Customs Union the funds applied at importing active matters of locally produced drugs were abolished, which brought along a competitive environment where, in the course of time, the incentives were cancelled,

Raw Material Production

Pharmaceutical raw material production in our country began in 1971 with the **tetrasiklin** production, coupling with the establishment of facilities producing other semi-synthetic material such as **penicillin** and **sephalosporin** and becoming a sector producing the active matter of various drugs by means of **fermentation**, **extraction** and **synthesis** in order to substantially get **antibiotics** and **analgesics**. The foundations of pharmaceutical raw material sector were laid by private sector.

The only state initiative is the **Afyon Alcholoid Factory**. Production facilities mostly belong to local playing important roles in the decrease. The production of synthetic penicillin, which held a grand importance in drug raw material sector in 1970s and 1980s, came to a complete halt (7).

Consumption

In 1999, drug sale at the value of $2.5 billion was realized in Turkey.

According to the data belonging to 1999 regarding the treatment groups: antibiotics ranks first with 20%, painkillers second with 13%, drugs for cold, rheumatism drugs and vitamins rank next.

Foreign Trade

Export

The Turkish pharmaceutical industry has acquired a level of quality, activity and trust so as to compete with many countries operating in the sector. In 1999 the export figures of the sector amounted to more than 50 countries including **Germany**, **U.S.A**, **Belgium, Finland**, **Holland**, **England**, **Switzerland**, **Italy** and **Japan.** The Turkish pharmaceutical industry has to continuously make both technical and marketing investments in order to keep pace with the ever-increasing cost of technical requirements and to be successful at foreign markets. However, the problems arising from the pricing system of Turkey, **high level of Value Added Tax (VAT) rates**, the drawbacks emerged in recent years have prevented the sector to obtain a high level of profit margin. Financially weak firms are not expected to display a high level of competitiveness. Thus, to support and strengthen the Turkish pharmaceutical industry hold a privileged position.

Export of the pharmaceutical Sector *(million $)* (7)

	Years	Raw Material	Drugs produced
1997	39	59	98
1998	61	68	129
1999	67	61	128

Conclusion

Today, the national and international pharmaceutical firms are among the most prominent sectors as a result of the efforts they have spent for 50 years in order to bring the Turkish pharmaceutical industry to a higher level. The contribution of the **Pharmaceutical Industry Employers' Union** in the mentioned progress should not be omitted. Opening to foreign markets speeded up with the tightening relations with the Turkish republics. The Turkish pharmaceutical industry has always been in touch with various organizations such as International Federation of Pharmaceutical Manufacturers, Pharmaceutical Group of the European Union, European Association of Pharmaceutical Wholesalers. As a result of the close relationship and application of the decisions in the sector, the Turkish industry covered a large gap and took strong steps towards betterment and development.

The foundations of the Turkish pharmaceutical industry were laid with the drug preparations in pharmacy laboratories in 1860, and today the sector maintains its production in about **100** modern production facilities with up to **4000** medical products, **TL 50 trillion** production value, an export capacity of **$ 150 million** to **50** countries, besides being able to export drug preparations and drug active matters and to satisfy the local market by **90 %**.

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The Development of Orthopaedics and Traumatology in Turkey and Some Results

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Summary

The independent science field becoming of Orthopaedics and Traumatology in Turkey has been realised by the efforts and contribution of many respected physicians. In this essay, initially a brief statement about the development of orthopaedics and traumatology is going to be presented, and the main subject, that is the efforts of the physicians who have contributed in the development of Orthopaedics and Traumatology in Turkey are going to be mentioned.

Key Words; Orthopaedics and Traumatology, History of Medicine, Turkey.

Introduction

The later separation of orthopaedics and traumatology from general surgery like urology, gynecology, and alike fields and its becoming as an independent science field has been in different dates and ways in every country. Orthopaedics, dealing with the treatment of the irregularities in the locomotor system consisting of bones, joints, and muscles, and traumatology, dealing with the treatment of the injuries after trauma, have been serving as independent departments in the surgery clinics until recent years.

The most important part of traumatology science field consists of injuries in the skeleton system. Especially, because of the incremental increase of mass injuries caused by the II. World War, and muscle-skeleton traumas caused by the industrialisation, the importance of traumatology has been raised (1). Initial treatment efforts aiming at the orthopaedic illnesses seen in children, in time has begun to loose their importance because of the prophylaxy and early diagnosis of many illnesses, and with the progress in living conditions a considerable variation in the age of patients has been seen. With the development and increased use of prosthesis, the importance of illnesses related to the age has been raised in orthopaedics (2).

In general surgery, the development of thorax surgery that deals with lung and heart illnesses has caused an increase in workload of general surgeons, meanwhile, almost a total annihilation of polio as a result of vaccination in Europe, decrease in bone and joint tuberculosis by the help of the use of antibiotic and tuberculostatic medicines has caused a limitation in the action area of orthopaedics. These reasons led orthopaedics and traumatology to be joined under an independent science field name (3).

The independent science field becoming of Orthopaedics and Traumatology in Turkey has been realised by the efforts and contribution of many respected physicians. In this essay, initially a brief statement about the development of orthopaedics and traumatology is going to be presented, and the main subject, that is the efforts of the physicians who have contributed in the development of

Orthopaedics and Traumatology in Turkey are going to be mentioned.

A General Look to the Historical Development of Orthopaedics and Traumatology in the World

Although the distinction of the orthopaedic illnesses and their treatment is based on centuries ago, systematic operative treatment has been available since 200 years (4). Although there have been fast improvements in orthopaedics in the last 70-75 years in our world, studies related to orthopaedics spread far back to the crutches found in the excavation carried out in the entrance of Hırkouf Cupola belonging to B.C. 2830s. Again, because of polio documents determining that the Prince of Egypt belonging to the 18th dynasty had hip and foot deformation in leg shortness take us to the past (1). Karl Jaeger reports that as a result of investigation of human bones that belong to prehistoric times, in the 53.8 % of the events, perfectly coalesced bones have been observed, and states that this could be the result of appropriate treatments applied during those ages (5). The validity of most of the applications of Hypocrates who has first identified congenital dislocated hip, many applications related to traction systems, including hip and leg fractures, plaster cast and bandage are still accepted (1,6).

Orthopaedics, which is the oldest speciality branch of surgery, is formed of Greek words *orthos* (to put in order, to set up and to remove deformations) and *paidos* (child) that means regular child (1,7). And, according to R. K. Sayre (1876) and Saint-German (1882) this term is based on *padious* (education, training) and means faultless education, putting in order. In this matter, although J. M. Delpeche (1828) has used the term *Orthomorphia* (8), and F. Bridneteau *Orthosomatia*, these have not been adopted (9).

The term orthopaedics was first used by the French physician Nicolas Andry (1658-1742) in 1741 (1,2,8). From that day so far the meaning of the term has changed very impressively. Although initially it has been prepared as the title of a guide for parents and identified as protective physician occupation, later it has developed as a new medicine branch (2).

In the early period when orthopaedics dealt only with innate anomalies, bone, joint tuberculosis and polio sequela, for the reason that these illnesses were seen more often in children, orthopaedics specialists had to deal with the other children's illnesses of surgery. And, the treatment of fractured, dislocated and injured parts was in the scope of general surgery. In time, orthopaedics specialists have begun to show close interest in traumatology, so that, "extremity traumatology" slowly has moved from general surgery into the scope of the orthopaedics clinics. In this matter, first England and United States of America, followed by Germany, France and Italy have taken the lead (10).

The inclusion of surgery as a course in medicine was first in 1745 by the special efforts of Dr. Gerhard von Swieten in University of Vienna. And, in 1785 traumatology courses started. In 1785 for the first time under Vienna Surgery Clinic semi-private "accident surgery station" (unfallstation) was founded. The first orthopaedics institute for disabled children was founded by Swiss Andre Venel (1740-1791) in 1780. He is accepted as the founder of surgery orthopaedics (5). The first orthopaedics hospital was founded in London in 1838 by John Little (1810-1894) who was the founder of orthopaedics surgery in England (8). In time, in orthopaedics special surgery setting up needs arose (1). In 1875-1900, orthopaedics clinics began to be opened at universities (5).

During the 19th century orthopaedics surgery was in the management of the private foundations as a sign of being wealthy. In the places named "Disabled Shelter Place", bone and joint infections, scoliosis and hereditary illnesses were aimed at being healed (2). Especially, with the increase in mass injuries caused by the I. World War, and incremental muscle-skeleton traumas caused by the industrialisation, it was seen for the first time that the term orthopaedic surgery has begun to be used (1). In the beginning works aiming at treating the orthopaedic illnesses seen in children, in time, have begun to loose their former importance because of

the prophylaxis and early diagnosis of many illnesses. And, with the positive progress in living conditions a considerable variation in the age of patients has occurred. With the development and increased use of prosthesis, the importance of illnesses related to the age has been raised in orthopaedics (2).

In Europe, the first independent university orthopaedics clinic and chair was found in Leipzig in 1923 by general surgeon Prof. Schede who was dealing with bone surgery. However, this clinic, like others, in the beginning has dealt only with deformations, not with traumatology (5). The previous orthopaedics clinics, on the other hand, have been establishments that attempted to treat the deformations only by the help of apparatus like corsets and alike, and private philanthropy foundations functioning as providing service without bed (3). Later, orthopaedics and traumatology in some universities has functioned as a section under general surgery, and in some universities as an independent clinic (5).

In general surgery, the development of thorax surgery that deals with lung and heart illnesses has caused an increase in workload of general surgeons, meanwhile, almost a total annihilation of polio as a result of vaccination in Europe, decrease in bone and joint tuberculosis by the help of the use of antibiotic and tuberculostatic medicines has caused a limitation in the action area of orthopaedics. These reasons form one of the reason for joining orthopaedics and traumatology under an independent science field name (3). In 1960s "Orthopaedics and Traumatology Clinics" was founded in Switzerland, Germany and France. In September the 26th in 1967, for the first time the "German Orthopaedics Association" changed its name as "Orthopaedics and Traumatology Association" (5). This situation has received the negative reaction of the general surgeons. The idea that in order for orthopaedics specialists to become successful in traumatology, they should first qualify in general surgery and then to change to orthopaedics and traumatology received a general acceptance (10).

The Development of Orthopaedics and Traumatology in Turkey

Like in all world, in Turkey as well the proceeding of surgery into a modern appearance has been in the 19th century. Until that period, surgery developed separately from physician profession, and for a long time surgeons worked as technical members under the control of physicians.

After the removal of Janisary profession (1826), in order to meet the physician and surgeon need of the modern army, for the first time in March the 14th, 1827 a *Medicine School* (Tıphane-i Amire), and a *Surgeon School* (Cerrahhane-i Amire) was founded. By this, in modern sense medicine education started. In the beginning, the education of surgeons was thought together with the medicine education. However, the urgent surgeons need of the army made it a must to train surgeons in a short time (11). While courses were given in Italian in the Medicine School, in the Surgeons School the education language was Turkish. Getting started in 1839, the education went on with the name "*Mekteb-i Tıbbiye-i Adliye-i Şahane"* and in French. The name "*Cerrahhane"* has been removed and a unique medicine school has been founded. In the same date a *Pharmacist Class* has been founded. However, the education programs and the duration of the surgeons and pharmacists was different from the one of the medicine students. During that time, duration of surgeon education was three years. Anatomy, small surgery, zoology, botanic, pharmacology, and short general pathology education was given. The first clinic was opened in 1842. In 1847 for the first time students were sent to Europe for education. After that date, the Military Medicine School was accepted as a faculty by Europe (12).

Civil Medicine School (Mekteb-i Tıbbiye-i Mülkiye) was founded in 1867. For the first time in the Civil Medicine School, and after 1870 in the Military Medicine School after the acceptance of the necessity to give the courses in Turkish and to take medical education to become a surgeon, the number of the individuals entering has decreased. This situation caused the number of surgeons that was already insufficient for the country's needs to decrease even

more. For this reason, in 1876 in Haydarpasha Military School *Small Surgeon School* was founded. Also, after 1879 with an exam available in medicine, bonesetters were granted "*Small Surgeon Certificate*". As a result of the acceptance of surgery as a speciality branch by the physicians, the surgeons class has spontaneously disappeared. The Civil Medicine School has taken the name faculty in 1908. In 1909 Civil and Military Medicine Schools were joined and took the name Medical Faculty (12-14).

First Developments in Orthopaedics

The inclusion of orthopaedics in medical education began in 1905 with Dr. Orhan Abdi (Kurtaran) (1878-1948). After graduating as a military physician in 1899, Dr. Orhan Abdi was sent to University of Bonn (Germany) by Sultan Abdulhamid in 1900. Between 1900-1902 he took orthopaedics education from Prof. Max Shede and learned the production of the orthopaedics equipments from Eschaum. Later, he became an assistant of Prof. Hoffa in Baviera and Prof. Sick in Hamburg. In 1905, by the order of the Padishah, he returned to İstanbul and began to work as a teacher at Military Medicine School "Orthopaedics and War Surgery". So, these two courses were given first by Dr. Orhan Abdi. After the consolidation of the Military and Civil Medicine Schools, he continued to give lectures as a teacher of "Orthopaedics and Big Surgery Operation". Again, in the same date, until a new clinic was opened, once in a week orthopaedics courses were added to Surgery. This course was given by Dr. Rıza Nur. Later, from time to time it continued as conferences and lectures with the name "Paediatric Surgery and Orthopaedics" (15).

With the foundation of the Medical Faculty it was seen that for the first time orthopaedics branch has become semi private. During those years, there were three Surgery Clinics in the management of Dr. Cemil Pasha, Dr. Kerim Sebati, and Dr. Orhan Abdi. The name of the III. Surgery Clinic was "Surgery and Orthopaedics". However, after the departure of Cemil Pasha in 1913, and the becoming of Dr. Orhan Abdi as the chairman of the II. Surgery Clinic, the name orthopaedics was removed (15).

In the late 1920s and early 1921s, Dr. De Lacombe began to give lectures with the name "Paediatric Surgery and Orthopaedics". As a substitution of Dr. De Lacombe who released from his duty in 1922, Dr. Mouchet (1886-1941) was appointed. During those years, it was seen that Dr. Akif Sakir Sakar (1888-1961), who has taken his place in the history of medicine as the person who established modern orthopaedics in Turkey, was appointed as an interpreter of Dr. Mouchet by Dr. Akil Muhtar (Ozden), the Dean of that time. Dr. Akif Sakir Sakar used to interpret Dr. Mouchet who was working on the orthopaedics patients once in a week in the Faculty Clinic in Cagaloglu, and his lectures that he was giving one day in a week in the auditorium in Haydarpasha. After becoming an Associate Professor in 1923, he began to give some lectures between the years 1923 and 1925. In 1925, after Dr. Mouchet changed to teach in "Surgery Operation and Techniques", he became the head of Paediatric Surgery and Orthopaedics Department, which did not have a clinic (5,15,16).

In 1927-1929, Dr. Akif Sakir Sakar worked in Hamburg with Prof. Sudeck on bone surgery (16). Seeing that fractures treatment and orthopaedics was not sufficient in Turkey, he showed effort to establish a modern orthopaedics clinic (10). In 1930 first Paediatric Surgery and Orthopaedics Clinic, which contained 30 beds, was founded. The first assistant of the clinic that was under the management of Dr. Akif Sakir Sakar was Dr. Iffet Naim Onur (5,15,16). So, he provided the first step to establish modern orthopaedics in Turkey. Additionally, seeing the significance of using visual materials in education, in the lectures and conferences for the first time Dr. Akif Sakir Sakar benefited from the photographs and operation images of the orthopaedics patients (15).

With the 31 May 1933 dated and 2552 numbered "University Reform Law", Istanbul Darulfunun was closed, and in 1 August 1933 Istanbul University was founded. The Medicine Faculty in Haydarpasha, institution and clinics were moved to the European side of Istanbul. So, Paediatric Surgery and Orthopaedics took its place in Sisli Etfal Hospital. In

the clinic Prof. Dr. Akif Sakir Sakar and Associate Prof. Dr. Munir Ahmet Sarpyener were working. During that period in the clinic that had 10 beds, the staff was not sufficient. The first book of the clinic was published by Dr. Akif Sakir Sakar in 1936 with the title "Lectures on Paediatric Surgery and Orthopaedics" (15).

Dr. Akif Sakir Sakar had three goals; the establishment of the clinic, Paediatric Surgery and Orthopaedics' becoming a specialisation branch, and separating Paediatric Surgery from Orthopaedics. His first step after the establishment of Paediatric Surgery and Orthopaedics Clinic was making it accepted as a specialisation branch. With this aim, he took the lead to enable the establishment of "Turkish Orthopaedics and Traumatology Surgery Society". The founders of the society, the centre of which was Istanbul Medicine Faculty Paediatric Surgery and Orthopaedics Clinic, founded in April the 27th 1939, were Akif Sakir Sakar, Ali Rıza, Faik Aldogan, Behzat Kamuran Yegen, Faruk Esen, Iffet Naim Onur, Munir Ahmet Sarpyener, Nazım Arman, Osman Cevdet Cubukcu, Sadrettin Onaran, Zeki Zeren, Zuhtu and Rıfat Hamdi Berkman.

Paediatric Surgery and Orthopaedics took its place among the 22 specialisation branches identified in the 2nd article of the 9 August 1947 dated and 6600 numbered "Regulation About the Documents of Medicine Specialisation". The assistantship duration was identified as 3 years in the 8th article of the regulation (15).

In May the 15th 1955 with the special efforts of Dr. Akif Sakir Sakar, the clinic moved to the new building in Capa that was formed of 5 floors, and attained a modern appearance. On the 2nd cellar floor of the clinic that had 100 beds, there were prosthesis atelier, auditorium, kitchen, laboratory, servant dormitory, laundry room, restoration atelier, morgue; on the 1st cellar floor there were polyclinic, quarantine, record rooms, roentgen, physical treatment and rehabilitation, burn treatment room, underwater and over water bath tanks; on the ground floor there were operation room, management division, rooms of the lecturers and assistants, library, archive, secretary part, canteen; and on the 1st and 2nd floors there were rooms for the patient and nurses (15). So, Dr. Akif Sakir Sakar has founded the modern orthopaedics clinic that was his ideal.

In 1960, when having a look at the table it was seen that there were 3 Medicine Faculties in Turkey, among the Paediatric Surgery and Orthopaedics Clinics, in Istanbul Medicine Faculty paediatric surgery, in Ankara Medicine Faculty conservative orthopaedics treatment, and in Izmir Medicine Faculty only child orthopaedics were the areas that were dealt more often. According to the Specialisation Regulation and traditions traumatology was done in the General Surgery Clinics. Although there were 4 Bone and Joint Illnesses Hospitals in Istanbul (Baltalimanı), Egirdir, Trabzon, and Urla, these were working as osteoarticular tuberculosis centres. Except orthopaedics specialist in Trabzon, Dr. Cevdet Alptekin, all specialists in these 4 hospitals were general surgeons. After the acceptance of Paediatric Surgery and Orthopaedics as a specialisation branch in 1947, the first assistants began to graduate in 1951. In 1960 there were only 10-12 specialists in all over the country (17).

First Developments in Traumatology

In Turkey first developments in modern traumatology started with the studies of Dr. Burhaneddin Toker (1890-1951) in 1921. During this period, most of the physicians were not interested in the treatment of the fractures and plaster preparation. Traumatology consisted of just simple chest and stomach injuries that were in the area of general surgery, and the treatments that were in the hands of most of the bonesetters. Against the important efforts of Dr. Burhaneddin Toker and Dr. Akif Sakir Sakar, it cannot be said that fracture treatments were done in the modern sense in the hospitals and clinics that were dealing with general surgery during that period (10).

After completing his medicine education in Turkey, Dr. Burhaneddin Toker went to Germany during the I. World War and worked together with the popular surgeons of that period Brauer and Küttner

for 7 years (1913-1920) in Berlin and Hamburg. During that period, because fractures-deformations and injuries were cured in the general surgery, he specialised in modern bone surgery. Returning to Turkey, he started to work as the Surgery Chief in Cerrahpasha Hospital, which was a municipality hospital. During those years, surgery treatment opportunities were insufficient. Fracture-deformation treatment was mostly done by the bonesetters. Most of the physicians were not interested in fracture treatment and plaster structure. Dr. Burhaneddin Toker, who was aware of the lacking points in this field, dealt especially with traumatology. In order to increase the number of the patients, he made friendships with the policemen who take injured people to the hospital, and assured that all injured around were taken to Cerrahpasha. In a short time, as a result of achieving important success Cerrahpasha Hospital started to work as an accident surgery centre. Attaining a mobile roentgen device from the municipality, by doing fractures reposition under radioscopy, they realised the first conservative modern fracture treatment in Turkey. Additionally, he had the Braun device, which was used in fractures, according to the schema and measures that he had brought from Germany, and used it after having it done by a smith by instructing him personally (3,5,10,18).

Dr. Burhaneddin Toker, who believed in the importance of publications in science, published "Journal of Turkish Surgery" as a surgery journal for the first time in 1927. Having the feeling that a surgery society is lacking, he took the lead in the foundation of "Turkish Surgery Society" in 1929 with the aim of improvement in the scientific works (18).

After the 1933 dated University Reform Law, the I. Surgery Clinic took its place in Cerrahpasha Hospital, where Dr. Burhaneddin Toker was the Chief. To the directorship of the hospital Prof. Rudolf Nissen was appointed. Dr. Burhaneddin Toker first as an Associate Professor was appointed to the assistantship of Nissen, and after 5 months became a Professor. After Hazım Bumin, the first Turkish surgeon from the new generation specialised and became an Associate Professor in 1937, Prof. Nissen decided that for the assistantship Dr. Dervis Manizade (1903-2003) would be appropriate. During those years, Dervis Manizade was working in the Traumatology Service of the II. Surgery Clinic of University of Vienna, and was preparing for Associate Professorship. In 1937 he started to work as an assistant of Nissen and Toker. In the clinic for the first time archive system was established (1938). He prepared patient follow forms, and made sure that these forms were filled in completely and regularly for each patient. During those years, fracture-deformation treatment was done within general surgery and was discussed that they are the subjects of orthopaedics branch.

After the departure of Prof. Nissen, Prof. Dr. Burhaneddin Toker was appointed to the directorship of the I. Surgery Clinic of the Medicine Faculty in 1941. He opened the surgery building in 1943, the plan of which was set by Nissen, and the construction of which started in 1939. So, the clinic took a modern appearance (18).

Dr. Toker and Dr. Manizade, who very closely followed the developments in traumatolgy, did many successful attempts. The first Smith-Petersen nail was applied by Dr. Toker in 1941, and the first intrameduller nail in the tibia fracture by Dr. Manizade in 1950 (3,5).

In 1951, after the death of Dr. Burhaneddin Toker, Cerrahpaşa I. Surgery Clinic was devided into two. To the directorship of the first clinic Dr. Kazım Ismail Gurkan, to the third clinic Dr. Fahri Arel were appointed (15). In 1960, Dr. Dervis Manizade, who was appointed to the directorship of the III. Surgery Clinic, for the first time gathered the traumatologic instances in one place. He accepted Dr. Kemal Bayraktar and Dr. Macit Uzel as specialist assistants in the clinic, who showed interest in this field by collecting the equipments necessary for traumatology. Between 1926 and 1963, by joining the I. and II. Surgery Clinics, a 6-sectioned Surgery Clinic was founded. And one of these was Traumatology Service, which had 30 beds and that was appointed completely for bone and joint injuries, and

orthopaedics instances. To the chairmanship of this department Dr. Manizade, who assured its establishment, was appointed (10).

The Gathering of Orthopaedics and Traumatology and Their Development in Turkey

In 1959, Dr. Rıdvan Ege (1925-), who has taken Orthopaedics and Traumatology education in United States of America and returned to Turkey started to work in the General Surgery Clinic of Gulhane Military Medicine Hospital since Orthopaedics was not established yet. The lecturer of the I. Surgery Clinic Prof. Dr. Necmi Ayanoglu has said that if sufficient number of orthopaedics patients are treated he would help in the opening of the Orthopaedics Clinic. Dr. Rıdvan Ege, who believed that skeleton traumatology was not the field of General Surgery, that it was the speciality of orthopaedists who dealt with muscle and bone illnesses, aimed at including trauma into Orthopaedics and to separate Pediatric Surgery, which as a result of an old French custom was added to Orthopaedics. Beginning to work on this matter, Dr. Rıdvan Ege completed 262 orthopaedic operations (33 vertebra, 62 hip and long bone fractures, 11 hip hemiarthroplastis and cup arthoplastis, 36 child hip, foot, polio operations, 15 tumour and other attempts) in 1 year, and published these in Turkish and English. Again, in the same period he visited the 3 Medicine Faculties in Turkey that dealt with Orthopaedics (Istanbul, Ankara, Izmir), and 4 Bone and Joint Illnesses Hospitals, and started a communication with his colleagues. After presenting his works to Prof. Dr. Necmi Ayanoglu, he agreed on presenting a suggestion to the Professors Committee for the establishment of Orthopaedics and Paediatric Surgery Clinic. He also accepted Dr. Rıdvan Ege's suggestion for naming the clinic as Orthopaedics and Traumatology. So, the separation of Orthopaedics from Paediatric Surgery, and Traumatology from General Surgery, and joining them as an independent Orthopaedics and Traumatology Clinic was realised first in Gulhane Military Medicine Hospital in 1961 (19). In September 1962, the first issue of Acta Orthopeadica et Traumatologica Turcica was published (20).

With 1963 Specialisation Regulation, after completing General Surgery education Orthopaedics, Paediatric Surgery, and Traumatology were accepted as high specialisation branches (5,15). In 1965, for the first time, in the Ministry of Health Ankara Numune Hospital Orthopaedics and Traumatology Clinic was founded and to the chairmanship of the clinic Dr. Orhan Aslanoglu was appointed. In 1966, the number of orthopaedists, including the assistants, reached the number of about 40. In the same year, the first National Orthopaedics and Traumatology Congress, organised by Dr. Rıdvan Ege, was held in May 25-28, 1966 in Egridir (19).

Regarding the increasing population of Istanbul, the superabundance of student number and the heavy load of patient care, with the decision of the University Senate after Istanbul Medicine Faculty, Cerrahpasha Medicine Faculty was founded within Istanbul University in October the 20th in 1967 (14,21). A board with the name Orthopaedics and Paediatric Surgery was established in Cerrahpasha Medicine Faculty linked to Surgery. On returning of Prof. Dr. Dervis Manizade, who had gone to Europe for scientific research has prepared a report and presented it to the Deanship with suggestion to change the name of the board as Orthopaedics and Traumatology. In 1969, he was appointed to the directorship of Orthopaedics and Paediatric Surgery board with the decision of the Professors Committee. The establishment of the Orthopaedics Board as a separate clinic was realised in 6 January 1971, and attaining the name of Orthopaedics and Traumatology in 22 July 1971 (5,10).

Another development realised in the same years was appointing orthopaedics specialists to the Forensic Medicine Association that was connected to the Ministry of Justice. On seeing the fact that reports concerning the decisions related to Orthopaedics and Traumatology were given by the physicians of other specialisation branches, and thus, causing medical and judicial mistakes, after 1969 orthopaedics spe-

cialist was appointed to the Forensic Medicine Association (20).

In 1970 for the first time, International Congress of Orthopaedics and Traumatology was held in Ankara. In the same year, in order to coordinate the works of Orthopaedics and Traumatology societies in the 3 big cities (Istanbul, Ankara, Izmir), and to serve Turkish physicians countrywide, with the lead of Prof. Dr. Rıdvan Ege "Turkish Orthopaedics and Traumatology Union Society" was founded. The society organises congresses once in every two years (17,19). So far, the last National Congress of Orthopaedics and Traumatology was the 18th, which was held in October 18-23, 2003 in Istanbul.

According to the Specialisation in Medicine Regulation published in 8 April, 1973 dated Official Newspaper, consequently the gathering of Orthopaedics and Traumatology under a single name, separating Paediatric Surgery from Orthopaedics and announcing it as an independent branch, giving the General Surgeons and Traumatologists, who have been dealing with Orthopaedics and Traumatology for 10 years, a specialisation authorisation for one time were decrees determined. So, totally 10 persons including Dr. Orhan Arslanoglu, who has been dealing with Orthopaedics and Traumatology, Dr. Dervis Manizade, who has been dealing with Traumatology for years were granted Orthopaedics and Traumatology Specialist certificate (17). With the foundation of High Education Association in 1981, the Orthopaedics and Traumatology Boards became departments.

The field of Orthopaedics and Traumatology has shown a great improvement in Turkey. The applications in Europe are realised successfully. Today, works are carried on in 9 sub branches: paediatric orthopaedics, trauma surgery, hand and microsurgery, elbow and shoulder surgery, sports injuries and arthroscopic surgery, arthroplastic surgery (artificial joint surgery), spinal surgery (spine surgery), foot and ankle surgery, skeleton system tumours (orthopaedic oncology).

Turkish Orthopaedics and Traumatology Union Association has established the Turkish Orthopaedics and Traumatology Education Council in September 2001 in order to ensure that the Orthopaedics and Traumatology specialisation and after specialisation education reaches the highest level, to provide the standardisation of the education institutions and to apply certificated sufficiency (board) exams. In the Council there are 3 working groups. These are: Determination and Inspection of the Orthopaedics and Traumatology Specialisation Education Standards Group, and Determination of the Education Standards After Specialisation Group (Exam Education Commission) and the Group Working to Determine About the Promotion Requirements in the Education Institutions of Orthopaedics and Traumatology Field.

In order to evaluate the infrastructure and facilities of the units that provide Orthopaedics and Traumatology education in Turkey, to discuss the sufficiency of these supplies regarding a standard education and to provide a guide that may be used in the determination of the standards required for Orthopaedics and Traumatology specialisation education, a report that comprised 2001-2002 period was prepared. According to this report, today in 71 institutions Orthopaedics and Traumatology specialisation education is provided. 43 of these are within universities, 19 are within the Ministry of Health, 9 are within the Ministry of Labour and Social Security. Regarding the distribution of these according to the provinces, it may be seen that there are 18 education clinics in Istanbul, 15 in Ankara, 8 in Izmir, 2 in Bursa. In other provinces of ours there is one education clinic in each. From all of the 9 sub branches stated above only 9,9% percentage is within the institution. 59% within the university clinics, 32% within the clinics of the Ministry of Health and in the 7,8% of the Social Security Foundation (SSK) clinics there are sub branch application. It is seen that in the institutions there are 6 the less and 141 the most beds. According to the figures of 2001 there are 119 professors, 90 associate professors, 72 assistant professors, 36 head assistants, 104 specialists, and 510 students having specialisation education (22).

Within the period of 2001-2002, totally 593 publications 193 of which in foreign language, and 908 presentations were completed (Universities: 300 Turkish, 169 foreign; Hospitals of the Ministry of health: 73 Turkish, 22 foreign; Social Security Foundation Hospitals: 27 Turkish, 8 foreign publications). It is seen that in the clinics of the Ministry of Health and Social Security Foundation there is more service load, and on the other hand, that especially regarding trauma the clinics of some universities are very insufficient.

As a result of this study it is seen that in Turkey the ongoing specialisation education has not reached the contemporary standards, and that there are differences between the institutions. For this reason, it is aimed at reaching the standards of the West by enhancing more unity among the institutions, preparing common education programs, removing the lacking things in the infrastructure and the facilities.

Conclusion

Orthopaedics, that began to its journey in Turkey in 1905 with Dr. Orhan Abdi Kurtaran by getting its place in the medicine education, beginning in the Military Medicine School, has gotten its first clinic in the Istanbul Medicine Faculty with the intensive efforts of Prof. Dr. Akif Sakir Sakar in 1931. Although it was accepted as a separate branch in 1947, until 1960 it has done common works under the names Orthopaedics and Paediatric Surgery Clinics, and has brought specialists. The development in Traumatology that began with Prof. Dr. Burhaneddin Toker, continued its improvement with a Traumatology Service within General Surgery for the first time in 1960 as a result of the works of Prof. Dr. Dervis Manizade. For the first time, with the efforts of Prof. Dr. Rıdvan Ege Orthopaedics was separated from Paediatric Surgery, and Traumatology was separated from General Surgery in Gulhane Military Medicine Academy in 1961 and took the name Orthopaedics and Traumatology.

Today, the works aiming at the improvement of education and service quality in the field of Orthopaedics and Traumatology, which has shown a great development in Turkey, are continuing.

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SCIENTIFIC EVENTS

8th Congress on the History of Turkish Medicine

It will be held in June 16-18, 2004, in Divriği, Sivas, Turkey.

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39. International Congress on the History of Medicine

It will be held in September 5-10, 2004, in Bari, Italy.

Contact Address :
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The 7th World Congress of Bioethics

It will be held in November 9-12, 2004 in Sydney, Australia.

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