In this historical article we are discussing the nephrological interest of some of Hippocrates’ statements, contained in his book «Aphorisms». There is not anything original in our method, as similar attempts have taken place repeatedly, even since antiquity. We however feel that in each era new insight can be gained by looking into the Aphorism via the prism of the current medical knowledge. The article is divided in two parts. One general, introducing briefly the reader to the author, Hippocrates, then to his knowledge on the kidney function and diseases, and lastly to the book itself, i.e. The Aphorisms. As the article isn’t addressed to historians of medicine, philologists and palaiographists, the first part of it offers only a bird’s eye view of the historical background of the Aphorisms and its several manuscripts and editions. In the second part, we are discussing 36 from the 400 Aphorisms, marked by the authors of this paper as having any renal interest, and is understandably more detailed. At the end we present our conclusions.

Key words: Aphorisms, haematuria, Hippocrates, history of renal diseases, proteinuria.

Part I: General Introduction

a. Hippocratic nephrological knowledge

Before proceeding to an aphorism-by-aphorism analysis, we have tried to summarize all Hippocratic “nephrological” knowledge, extracted from most of his works, in order to introduce the reader to the background of his aphoristic assumptions. Regarding renal anatomy and physiology, Hippocrates described the development of the kidneys at the end of renal arteries, branches of the abdominal aorta, and the parallel direction of the nerves. He correctly defined the aorta as originating in the heart. He observed the anatomical connection of spermatic arteries with the kidneys, a fact that led to the notion that sperm is initially created inside the
kidneys, is then delivered via the spermatic vessels to the testicles and finally outside the body. He commented on the similar shape of both kidneys and likened their colour to that of apples. The calyces and pelvic cavity were observed and commented on. He also described the ureters as descending from the kidneys and ending in the bladder. He described the granular and viscous texture of the kidneys and the excess of humidity in their interior. He wrote that the renal vessels transfer blood with waste liquid products of metabolic reactions to the kidneys and the blood returned, purified, back to the entire body. Hesitantly, he considered the kidneys as “not alien to the excretion of urine”. His observations on pathophysiology, diagnosis and prognosis of renal diseases are spread all over his works. Hippocrates linked various urological symptoms with their correct diagnosis and prognosis. He used the term ‘nephritic’ to describe patients with a variety of renal ailments, like strangury, anuria and hematuria.

b. The etymology and history of the Aphorisms

It is said that “The beginning of education is the understanding of the names”. Thus, we start this section by discussing the term “Aphorism”. It derives from the Greek: aphorizein [apo: from; horizein, horizon, boundary] to delimit, mark off, divide, define. In form, aphorisms are always terse and trenchant, demonstrating maximum comprehension in minimum expression. If we can use an aphorism to define what aphorism is, then the most appropriate one would be: “The finest thoughts in the fewest words”. The term was originally coined to mean the Aphorisms of Hippocrates that are included in the Corpus Hippocraticum. However, works in similar style have been written earlier by the pre-Socratic philosophers, that is thinkers of the 7th and 6th cent. B.C. working mainly in the Greek colonies in the Ionian Shore and in South Italy, without any particular literary term. Hippocrates was deeply influenced by the pre-Socratic’s chiefly in his theory of the four humors and his adherence to the “arithmetical” that is numeric, medicine. However, he had broken away with the lot of their medical theories. It is interesting to note that aphorismatic texts can be found in various other disciplines. The Ten Commandments, the Aphorisms of the Seven Wise Men of Greece, the Blessings of Jesus during his Homily on the Mountain, are just a small sample of such short and heavy in meaning writing.

The Hippocratic “Aphorisms” were probably written circa 400 BC and contained four hundred entries, dealing with all aspects of practical medicine. It is considered one of the few genuine works in the Corpus. This belief was held as far back as Galen and the Byzantines to more recent writers like Emile Littre in the 19th cent. Some reservations on their authenticity have been expressed, chiefly by Lloyd2 and Jouanna3. The book was very influential thanks to its clarity and briefness. Numerous writers had extensively commented on it, while the lay practitioner had a handy competetum. From the Greek-speaking world, suffice to name only Soranus, Rufus, Galen, Paladius, Stephanus of Athens4, Theophilus Protospatharius, Damascius, and Johannes Actuarius.

The Islamic world had been also heavily influenced. We report here the Arabic translations of it by Ibn al-Quff, Abū al-Faraj ibn Muwaffaq al-Din Ya‘qub ibn Isa‘q (d. 1286/685), who composed a number of treatises, including an important treatise on surgery and a popular commentary on the Aphorisms of Hippocrates, and Ibn Abī ādīq, from Nishapur in Persia. Because the latter composed a popular commentary on the Aphorisms of Hippocrates, he was known in some circles as “the second Hippocrates” (Buqrā al-thānī). He completed the commentary on Galen’s On the Usefulness of the Parts in the year 1068/460, which provides us with the one firm date in his biography. In mimicking Hippocrates, other influential Arab scholars had composed their own “Aphorisms” which in reality were edited copies of the original. We recall Al Razi’s Kitāb al-Murshid (The Guide) This general treatise on medical aphorisms was a late composition by al-Rāzī, for in it he refers too many of his earlier treatises. In addition to being titled Kitāb al-Murshid (The Guide), it was also sometimes titled Kitāb al-Fusul (The Book of Aphorisms). It has been suggested that this relatively short introduction to basic medical principles was intended as a lecture to students. In the introduction, al-Rāzī says that because of misunderstanding and confusion regarding the aphorisms of Hippocrates, he has composed new medical aphorisms which could serve as an introduction to the medical art and a guide for students. The basic principles underlying the medical art and humoral pathology and physiology are presented in the form of 377 aphorisms grouped into 37 chapters.
The treatise does not appear to have been translated into Latin.

The work has also influenced the Jewish doctors. One of Maimonides’ medical writings is the Commentary on the Aphorisms of Hippocrates. In this work, Maimonides occasionally criticizes both Hippocrates and Galen where either of these Greeks differs from his own views. Following the fashion he also wrote his own “Aphorisms” called the Medical Aphorisms of Moses “Pirkei Moshe”.

As expected, the Aphorisms were translated into Latin at an early stage and thus disseminated in Western Medical thought. The first translations were undertaken by Burgundio of Pisa (from Greek 12th century), by Gerard of Cremona (12th century, Toledo from Greek) and by William of Moerbeke and others (from Arabic after 1260). The book had reached the then remote England as early as 1145. Rabelai in France gained his reputation as a serious scholar with the edition of the Aphorisms’ translation by the Gryphius publishing house in 1532. Characteristic of the high esteem the work had in the Renaissance is the fact that Theophrastus Paracelsus, on June 24, 1527, surrounded by a crowd of cheering students, publicly burned the works of Avicenna and Galen and showed respect only to the "Aphorisms" of Hippocrates. The Aphorisms being a useful handy book for medical doctors and lay mean alike, were soon translated (the original or Galen’s commentary of them) in the local languages of each region and were also one of the books early published after the invention of printing in the 15th century. As it was expected personal variations by various doctors were published bearing also the title “Aphorisms”. Even no medical writers were influenced by the “Aphorisms”. Goethe’s study of the “experience” expressed in Hippocrates’ Aphorisms was particularly fruitful for his "Wilhelm Meister".

Part II: Analysing the nephrological meaning of the Aphorisms

In this second part, we analyze the Hippocratic aphorisms of nephrological interest and try to interpret them and compare them to our contemporary knowledge. Although there are other similar works on various diseases, they rarely include so many aphorisms referring to a single specialty. We used the Scottish medical doctor Francis Adams’ (1796-1861) translation and the French medical doctor and lexicographer Paul-Emile Littre’s (1801-1881) edition of Hippocrates’s Texts that have the same citation indexing, i.e. in sections and aphorisms. Where we thought that some aphorism could have a different meaning than the one given by Adams’ translation we added the alternative meaning in brackets, leaving the text unaltered. We also compared our comments with those of previous ancient and Byzantine writers. We used Kühn’s 1965 edition for Galen’s “In Hippocratis aphorismos commentarii”, and Hakkert’s 1966 edition for the Byzantine medical writers Theophilus’, Damascius’, and Stephanus’ treatise “Commentarii in Hippocratis aphorismos”.

(Theophilus Protospatharius, circa 7th c. AD, was a physician in the court of the Byzantine Emperor Heraclius, Stephanus of Athens was a Byzantine physician of the 6th century and Damascius was a Byzantine physician of the 9th c. AD – not to be confused with the neoplatonic philosopher). Although they wrote comments for all aphorisms, we included only those that, to our opinion, further elucidate each aphorism’s meaning. The exact citation is next to each comment, in brackets. The aphorisms have been arbitrarily classified into categories independently from their sequel in the original text, but some of them span to more than one category. We proceed now to the detailed discussion of each aphorism.

The «Nephrological» Aphorisms

i. On uroscopy (without specific diagnosis and prognosis)

[4.69.] When the urine is thick, grumoss, and scanty in cases not free from fever, a copious discharge of thinner urine proves beneficial. Such a discharge more commonly takes place when the urine has had a sediment from the beginning, or soon after the commencement.

This could very well be a description of an oliguric renal failure complicating a febrile disease. The scanty amount of urine that is thick and “grumoss” (“thrombodea”, i.e. like a thrombus, dark red, curdled) may very well be the result of an acute tubular necrosis, while the large amount of thin urine that follows could represent the lysis of the failure with its polyuric phase.

[4.70.] When in fevers the urine is turbid, like that of a beast of burden, in such a case there either is or will be headache.
The urine of horses, donkeys and cattle are turbid, probably due to the high concentration of phosphates that they consume through their vegetarian feeding. Ancients had noticed that and had compared it with the transparent human urine. This has been initially reported in Mesopotamian writings, then in ancient Greek writings and later in the Arabic medical writings. Even the most concentrated human urine can be dark yellow but is still transparent. The most possible explanation for the turbid urine Hippocrates describes is either pyuria or an overexcretion of organic or inorganic salts. Such a condition will eventually lead to an abnormal internal milieu and thus, possibly, headache. In the case of macroscopic pyuria one can suggest pyelonephritis hence the headaches. In the case of turbid urine due to proteinuria (“macroscopic” proteinuria if one can coin such a term) we are talking about a massive, nephrotic range proteinuria. Such a condition will almost certainly be accompanied by activation of the renin-angiotensin system with salt retention, generalized oedema and hypertension. The “either is or will be headache” prediction could also be a sign of hypertension.

4.71. In cases which come to a crisis on the seventh day, the urine has a red nubecula on the fourth day, and the other symptoms accordingly.

This is a prognostic aphorism. The hematuria that presents on the fourth day after the outbreak of the disease is a sign of the severity of the disease and the aphorism predicts that there will follow a crisis on the seventh day. By crisis it is meant the end of the disease, not worsening. Although it is not unusual a transit hematuria to seize after a few days, we cannot pay any significance to the numbers four or seven of the corresponding days. This numbering is a remnant of the presocratic and Pythagorean teachings on the significance of numbers in medicine. It was based on the Mesopotamian and Babylonian line of thought to connect earthly phenomena with the phases of the moon.

4.72. When the urine is transparent and white, it is bad; it appears principally in cases of phrenitis.

This could describe a patient with advanced renal failure. The “transparent, white urine” could be the description of isosthenuria of chronic renal failure. Galen and Damascius commented that the “phrenitis” was due to the retention of toxic substances (yellow bile) that weren’t properly excreted through urine. They were accumulated in the brain and caused the symptom. We suggest that nothing has changed in the interpretation of this aphorism till now. If we replace “yellow bile” with “uremic toxins” we have a description of neurological signs of severe renal failure i.e. uremic encephalopathy.

4.76. When small fleshy substances like hairs are discharged along with thick urine, these substances come from the kidneys.

This could be one of the earliest descriptions of blood (or coarse granular) casts. What impresses the most is Hippocrates’ certainty that such substances come from the kidneys. Hippocrates was well aware of the complicated anatomy of the kidneys, although he could not explain their function. He clearly distinguished “blood in the urine” as a sign of haemorrhage i.e. “a ruptured vessel from the bladder or kidneys”, and the “fleshy substances” as something that originated from the kidneys.

4.77. In those cases where there are furfuraceous particles discharged along with thick urine, then the bladder has scabies (is “scabious”).

Thick urine with “furfuraceous” particles probably describes cystitis with apoptosis of squamous cells from the epithelium of the bladder. It could also be a case of cystitis with white cell aggregates. The term “scabious” is descriptive rather than diagnostic.

7.31. When there is a farinaceous sediment in the urine during fever, it indicates a protracted illness.

This is a description of cases of fevers that are complicated by either massive apoptosis of epithelial cells or pyuria. In either case the renal involvement, an acute inflammatory condition or pyelonephritis, is indeed a case that would had persisted considering Hippocratic means of treatment.

7.32. In those cases in which the urine is thin at first, and the sediments become bilious, an acute disease is indicated.

Galen in his comment clarified that Hippocrates meant black, not yellow bile. He then explained that this aphorism refers to time only, not to locum, i.e. the aphorism predicts the course of disease, not the affected organ.

Is this a description of acute tubular necrosis or post infectious glomerulonephritis? If this aphorism is interconnected to the previous one, i.e. it refers to patients with fever, is probably an exacerbation of some chronic renal disease. The thin urine could be a description of the isosthenuria of a chronic disease. Although “bilious” in modern English would mean green, Hippocrates refers to bilious as either yellow or black [i.e. very dark red].
If we assume he means black bile, as Galen states, then this aphorism describes an acute exacerbation on a chronic condition.

[7.33.] In those cases in which the urine becomes divided there is great disorder in the body.

This aphorism refers to urine with a big quantity of sediment, making them appear “divided” in two parts, sediment and suspension. The large amount of sediment, whatever the case maybe predisposes to a very severe condition.

[7.34.] When bubbles settle on the surface of the urine, they indicate disease of the kidneys, and that the complaint will be protracted.

Galen elaborated on this Aphorism: “Bubbles are created when the liquids are stretched by air. And usually this happens when the liquid contains something sticky. In which case the bubbles don’t break easily and become permanent...”

This is the most frequently quoted “renal” Hippocratic Aphorism and it could be one of the earliest descriptions of proteinuria. It is the increase of the surface tension of the urine due to the proteins that produces this phenomenon. Unfortunately the aphorism does not give any detail concerning the patient’s condition, i.e. edema, weakness, headaches (hypertension) etc.

[7.35.] When the scum on the surface is fatty and copious, it indicates acute diseases of the kidneys.

Regarding this aphorism all commentators stated that the presence of gross quantities of fat on the surface of urine indicates decomposition of the fat in the body in acute generalized diseases or the perinephric fat in diseases of the kidneys. They also connected this case with cases of fatty stools as having the same cause. The notion was repeated till very lately under the term pimelorrhea. Although arbitrarily, due to the inadequate data this aphorism provides, it could be the description of a nephrotic range non-specific proteinuria with all kinds of proteins excreted, thus the “fatty” (lipoproteins) and “copious” (in gross quantity).

[7.36.] We must look to the urinary evacuations, whether they resemble those of persons in health; if not at all so, they are particularly morbid, but if they are like those of healthy persons, they are not at all morbid.

This aphorism is rather a reminder to all physicians: Always look at the patient’s urine. It reminds of another “aphorism” by sir Robert Hutchison at the beginning of the 20th century: “The ghosts of dead patients do not ask why we did not employ the latest fad of clinical investigation; they ask ‘why did you not test my urine?’” Hippocrates so much believed that the examination of urine was fundamental for diagnosis and prognosis that declared that if the urine of a sick person are normal then the prognosis is favourable.

ii. On diagnosis

[4.75.] Theophilus stood on the grammar of the aphorism stating that Hippocrates used a continuous tense for urinating blood and pus, thus indicating that the aphorism refers not to rupture of an abscess from another organ like the liver, into the urinary system, in which case the blood and pus urinated would not last long, perhaps two or three days. “And why did he not mention the ureters? Because by mentioning the two ends he included the middle.” Damascius added: “Urinating implies many days... For urinating and urinate are not the same.” It is interesting to notice the detail in which these commentators analyzed this aphorism. The English translator paid no attention to the grammar of the aphorism. A more precise translation is: “If [a patient] is urinating [ureei = ουρέει] blood or pus, this indicates ulceration of the kidneys or the bladder”. Because “ουρέει” (is urinating) implies continuity while “ουρεσε = ούρησε” (urinated) implies only an instant. The important message of this aphorism is the chronicity of the disease.

[4.41.] A copious sweat after sleep occurring without any manifest cause indicates that the body is using too much food. But if it occurs when one is not taking food, it indicates that evacuation is required.

In this case the skin is used as an alternative route for fluid elimination, in cases of overconsumption of food. But in cases where there is profuse sweating without overconsumption of food, Hippocrates states that it is a sign of excess fluids that need to be eliminated through some kind of treatment, i.e. the natural eliminating organs, kidneys and/or gastrointestinal tract, are malfunctioning, unable to offer proper catharsis, and therefore some other kind of provoked catharsis must be applied.

[4.74.] When there is reason to expect that an abscess will form in joints, the abscess is carried off by a copious discharge of urine, which is thick, and becomes white, like what begins to form in certain cases of [exhaustive] quartan fever. It is also speedily carried off by a haemorrhage from the nose. [If a nose-bleed also occurs as well, lysis will come very fast].
Here, Galen and the Byzantine commentators state that the substance accumulated in the joints can be removed by urine and thus the patient be cured.

What would be the triggering factor “to expect that an abscess will form in joints”? Probably over-consumption of food and wine from an adult male in case of hyperuricaemia. Hyperuricaemia could form tophi, which resemble abscesses (gout), while polyuria with urine full of a white material (amorphous uric salts) will gradually lead to the lysis of arthritis. The aphorism does not indicate however if the polyuria was spontaneous or was to be achieved by some medical intervention such as water consumption or some medication.

[4.78.] In those cases where there is a spontaneous discharge of bloody urine […]where they are urinating bloody urine, it indicates rupture of a small vein in the kidneys.

The key-word in this aphorism is “spontaneous”. Hippocrates had obviously noticed some cases of hematuria that had no apparent cause. In other aphorisms he refers to hematuria as the result of some known or at least suspected cause, like the passing of a stone or trauma, or a systemic disease with fever, or cancer. But he realized that a spontaneous hematuria could occur with no apparent cause in an otherwise healthy person, and that is the reason why he attributed this condition to a “rupture of a small vein”. Galen elaborates correctly on the fact that, if “spontaneous” means without apparent external cause (i.e. trauma), it may well be a case of what we call today crush syndrome. Theophrilus again reminds the reader of the grammar of the aphorism, using the verb “urinating”, not “urinate”, implying a long duration of the sign. According to Eknoyan aphorisms 4.75 to 4.78 probably describe papillary necrosis. We suggest that it may well be a case of IgA nephropathy.

[4.79.] In those cases where there is a sandy sediment in the urine, there is calculus in the bladder.

The “sandy” sediment in the urine could be calcium salts or uric salts. In either case the existence of calculi in the bladder and/or kidneys of such a patient is highly probable.

[4.80.] If a patient pass blood and clots in his urine, and have strangury, and if a pain seizes the hypogastric region and perineum, the parts about the bladder are affected.

[7.39.] When a patient passes blood and clots, and is seized with strangury and pain in the perineum and pubes, disease about the bladder is indicated.

These two aphorisms are almost identical. Aphorism 7.39 was probably added later.

These are diagnostic aphorisms. The topographic localization and association with anatomic structures gives a good idea of Hippocratic knowledge of anatomy. Hippocrates stated that in such cases the parts “about the bladder” suffer.

[4.81.] If a patient pass blood, pus, and scales, in the urine, and if it has a heavy smell, ulceration of the bladder is indicated.

Theophrilus: “This aphorism gives three facts, locus, constitution and malignity of the affection. Because by scales, which mean petaloid, indicates bladder affection, by pus and blood, indicates abrasion; for there cannot be pus in the urine without ulcer; And by heavy smell, meaning malodourous, indicates malignity; for the malodorous is a sign of sepsis and sepsis indicates malignity”

This aphorism probably describes a severe case of unattended infection of the genitourinary system. It could also be tuberculosis or cancer complicated by a common infection. The infection is probably in the bladder as the aphorism refers to “scales” which may means apoptosis of bladder epithelial cells.

### iii. On prognosis

[4.83.] When much urine is passed during the night, it indicates slight retreat of the disease.

This seems like a description of heart or kidney failure where the extravascular fluids are mobilized from the edematous feet during the night and are eliminated through the kidneys with a deceptive improvement of symptoms. Galen and Damascius suggested that the condition was due to reduced excretion of the fluids that were supposed to be excreted by the gastrointestinal system during night and thus had to be excreted by the kidneys.

[6.6.] Diseases about the kidneys and bladder are cured with difficulty in old men.

Galen states that the reason the elderly are cured with difficulty when they suffer with diseases of the genitourinary tract is because they also suffer from other diseases as well.

In a contemporary medical “aphorism” it is written that “those who are older than while those younger than fifty, usually have one disease that explains all symptoms and signs”. Older patients usually have more than one disease and most of these diseases tend to affect the urogenital system quite often. Diabetes, hypertension, heart failure, already
deteriorated renal function and prostate hypertrophy (in men) and mild immunodeficiency, make the cure of renal diseases far more difficult in the elderly than the young. Hence, this aphorism is correct.

[6.11.] Hemorrhoids appearing in melancholic [those with increased black bile] and nephritic affections are favourable.

One more aphorism that highlights Hippocrates’ belief that some diseases need some kind of catharsis to be cured. The appearance of haemorrhoids with probable rupture and bleeding would provide some means of spontaneous katharsis. Needless to say, it would also lower blood pressure.

[6.28.] Eunuchs do not take the gout, nor become bald.

[6.29.] A woman does not take the gout, unless her menses be stopped.

[6.30.] A young man [boy] does not take the gout until he indulges in coition.

Aphorisms 6.28, 6.29 and 6.30 actually deal with the same subject: The relationship between sexual hormones, gout and baldness. We now know that testosterone levels increase gout and baldness and that oestrogens lower them. The male:female ratio of gout in premenopausal women and similar age-group men vary from 7:1 to 9:1 and becomes 3:1 in ages older than 65 years31. Even more impressive are Galen’s comments. Galen added that not only the absence but also the irregularity of menses was connected with gout in women, and even reported the rare cases of gout in women with normal cycles18a,153,4 as well as in Littre’s edition of the Aphorisms, the word is “cough”.

If the aphorism indeed referred to hiccups it may be a case of end stage renal failure or, more probably, describes cases of chronic or tension ascites that cause pressure on the phrenic nerve. Indeed, in such cases of non-compensating, non-retractable ascites, either from heart or liver failure, the emergence of hiccups could be a grave sign.

[7.81.] In the discharges by the bladder, the belly, and the flesh [the skin?] if the body has departed slightly from its natural condition, the disease is slight; if much, it is great; if very much, it is mortal.

This simple aphorism connects the severity of the sign with the course of the disease. The abnormal urine, faeces and sweat become prognostic tools when compared with the normal excrements34. The more the aberration from the normal, the worse the prognosis is.

iv. On therapy

[6.36.] Venesection cures dysuria; open the internal veins of the arm.

This whole aphorism is based on the ancient belief that certain veins correspond to certain organs. By cutting a certain vein, the corresponding organ would be relieved by the excretion of extra or toxic fluids that had accumulated in it. This theory was erroneous and had led to horrific exaggerations especially during the Middle Ages35. But we must not forget that till the middle of the 20th century, bloodletting with leeches was a common treatment recommended by certain professional doctors as was bloodletting with cupping over the lumbar region36 and is still used in some parts of the world. The correct principle behind this erroneous practice was the elimination of inflammatory toxins from the blood. In Hippocrates’ time this was attempted via bloodletting while nowadays it is attempted via dialysis.

[7.29.] When strong diarrhoea supervenes in a case of leucophlegmatia, it removes the disease.

By the term “leucophlegmatia” Hippocrates
states the overabundance of white phlegm, one of
the four humors. In contemporary English, this
could be interpreted as water overload and gener-
alized oedema. The term was coined due to the
white colour of the skin seen in such patients. The
strong diarrhoea removes the excess water thus
providing lysis of the disease. In this case here, the
gut is the method of clearance.

[7.48.] Strangury and dysuria are cured by drink-
ing pure wine [drunkenness], and venesection; open
the vein on the inside.

The drinking of pure wine probably has a
slight analgesic, diuretic and antidepressant effect
(The original Greek text uses the word drunken-
ness). As for the bloodletting, that has to be done
from a specific vein, as we have already mentioned
commenting on aphorism 6.36

[4.82] When tubercles form in the urethra, if
these suppurate and burst, there is relief.

The “tubercles” are probably tuberculosis gran-
uloma from genitourinary tuberculosis or from
any other chronic infection. Their location, inside
the urethra, would cause pain, dysuria and difficul-
ties in voiding. Undoubtedly their evacuation re-
lieves the patient.

v. Of general interest

[2.10] Bodies not properly cleansed, the more
you feed them the more you injure.

This aphorism may well apply to renal failure,
as well as to the failure of other organs, like the liv-
er or heart. In the case of renal failure, the low pro-
tein diet is the most beneficial and it is interesting
to note that the diets described for chronic diseases
in the Hippocratic writings were low protein diets.
Consequently, if the patient in renal failure is not
cleansed” of its uremic toxins, the more we nour-
ish them the more we injure them.

[4.2.] In purging we should bring away such
matters from the body as it would be advantageous
had they come away spontaneously; but those of an
opposite character should be stopped.

We believe that this aphorism is similar to the
theoretical basis of dialysis. Perfect dialysis will re-
move those substances that would have been re-
moved had the kidneys not been damaged, and pre-
vent the loss of those substances that the kidneys
would have spared.

[4.3.] If the matters which are purged be such as
should be purged, it is beneficial and well borne; but

if the contrary, with difficulty.

In this aphorism, which is connected to the
previous one, Hippocrates judges the necessity of
the cure by its result. If we removed unnecessary
substances then the patient will improve and be
comfortable with the treatment, but if we removed
the necessary ones then the patient would hardly
tolerate it.

These three aphorisms on purgation as a
means for eliminating metabolic toxins may not be
as alien to modern medicine as it looks. We still try
to excrete some toxins in renal failure via the gut.
Suffice to notice the cation-exchange resins in hy-
perkalemia or the phosphate binders in hyperphos-
phatemia.

Conclusions

Having reviewed Hippocrates’ Aphorisms
with some nephrological interest, we are left with
the impression that these are fine examples of the
power of empiricism in its best. The knowledge
displayed is just the personal opinion of a compe-
tent physician, not trained in evidence-based med-
icine. We are not going to rejoice about his fore-
seeing of many renal signs and symptoms and the
pathogenetic mechanisms responsible. Although
he had been rightly called the «Father of Clinical Nephrology», it requires a lot of good will to claim
also that he had told almost everything that we
now know in this field. In writing history of medi-
cine we face two risks. The one to acclaim some
scientists that they were the first to discover a dis-
case, a symptom, a treatment (the well - known “I
told it first” syndrome)37, or to conclude that
everything has been told before and trying to sup-
port it with biased arguments «proving» the excel-
lence of our medical ancestors. It is evident that
Hippocrates in the Aphorisms displays in the
briefest possible way his ability of astute clinical
observation and his scientific urge to explain
everything logically, using the available to him
nephrological knowledge. Very few modern ne-
phrologists could aspire to such a successful under-
standing of the kidney diseases with so very limited
means. Galen’s and to minor degree ‘Theophilus’
and co comments on the text display also the an-
cients and medieval medical writers effort to logi-
cally explain and elaborate on renal matters. In
many instances we had been unable to add very
much to their assertions.
We conclude that in spite of the fact that Nephrology is a new speciality there is a very long road paved to its current level. Not as a questioning tradition worth to be discussed in an «after dinner talk», but as a very scientific way of thinking. This is better understood by employing data both from the history of medicine and from nephrology.

Περίληψη

Οι Ιπποκρατικοί αφορισμοί νεφρολογικού ενδιαφέροντος υπό το φως της σύγχρονης κλινικής γνώσης. Εφόσον η ανασκόπηση αυτή δεν απευθύνεται πρωτογραφολόγου στο πρώτο τμήμα της τελευταίας ενότητας παρέχεται μια φευγαλέα επισκόπηση σε ιστορικούς της ιατρικής ή σε φιλολόγους και τη δεύτερη που αναφέρει τις νεφρολογικές του δοκιμές κατατοπίζει περιληπτικά τον Ιπποκράτην εισαγωγή που κατατοπίζει περιληπτικά τον περαστικό και στο παρελθόν, ακόμη και στην αρχαιότητα. Πιστεύουμε όμως πως σε κάθε εποχή το κείμενο είναι πρωτότυπη, καθότι παρόμοιες προσπάθειες δεν είναι πρωτότυπη, καθότι παρόμοιες προσπάθειες δεν είναι πρωτότυπη, καθότι παρόμοιες προσπάθειες

Λέξεις κλειδιά: αιματουρία, αφορισμοί, Ιπποκράτης, ιστορία νεφρικών παθήσεων, πρωτεϊνορία.

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