

Articoli/Articles

INTESTINAL OBSTRUCTION.
A PARADIGM OF EARLIER INFLUENCES
ON THE MEDICINE OF LATE BYZANTIUM

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SUMMARY

The study and analysis of aetiology, symptomatology and treatment of intestinal obstruction, based on the texts of Byzantine physicians from the early until the late epoch, prove that the way in which this illness is conceived is substantially unchanged throughout this period. The texts of Byzantine historians and chroniclers present three fatal instances of this disease (ileus or chordapsus, according to the terminology of Byzantine medicine). These are the cases of the Emperor Tiberius I Constantine (578-582), Patriarch Anastasius (730-754) and Empress Theodora (1042 and 1055-1056); the causes of their death remained unknown in the broader medical and historical bibliography. Intestinal obstruction is one of the diseases which probably supported earlier researchers in their opinion of a substantially 'static condition' of Byzantine medicine.

Introduction

A strong work of research is still necessary to bring to light medical texts dating from middle and late Byzantium, in order to paint a more complete picture of the conditions of medicine in that age¹. However, consulting the material already published, we can appreciate a medical contribution which is greater than the one propounded by certain 19th century historians with the idea of a *barren stagnation* of medicine². In the field of surgery, in particular, certain indications exist, such as the separation of Siamese twins (10th century)³ and the lithotripsy in the bladder recommended by Theophanes (9th century)⁴, controverting the

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view that surgery deteriorated after the age of Paul of Aegina⁵. Apart from personal observations about surgical techniques - which show that Byzantine doctors not only were practising physicians but also enriched their surgical techniques⁶, many clinical observations on internal medicine survive. The example of Romanus⁷ (10th -11th centuries), who occupied the high position of *Protomenites* in the Imperial Hospital of Myrelaeon, clearly shows this. In his work *On signs of acute and chronic diseases* he offers personal observations on several diseases, introduced by the phrase *I saw (perceived) them* (ὡς ἐγὼ ἐώρακα). Furthermore, the Byzantine physicians did not slavishly follow the hippocratic and galenic dogmas, as shown in the text of Symeonis Seth' *Ἀντιρρητικὸς πρὸς Γαληνόν* (*Objections to Galen*)⁸ and in the satire *Timarion* a work of an anonymous writer of the 12th century doubting and satirising the humoral theory of Hippocrates; even Galen does not escape barbs of criticism⁹.

Many similarities exist between the clinical picture and treatment of some disease as included in the medical texts dating after the 9th century and the earlier writings; these are probably due to copying, a fact which apparently justifies the idea of a *static* medicine in this age.

In this paper, the opinion of the most important physicians in Byzantium about intestinal obstructions are examined, with the aim of studying the possible influences of earlier texts on those written later than the 10th century.

Material

Intestinal obstruction is a well-known disease in the works of the Byzantine physicians, called *ileus* or *chordapsus*, both terms derived from the Corpus Hippocraticum¹⁰ (*Aphorisms*, XXII and *Coan Prenotions*, XXX). It should be noted that in the Byzantine era *ileus* included all cases of intestinal obstruction, both mechanical and functional, in spite of the modern terminology¹¹ in which this term always refers to any condition of intestinal distention and slowed or absent passage of digesta without a demonstrable mechanical obstruction (paralytic ileus).

Oribasius¹² (4th cent.), the earliest eminent Byzantine physician, describes the disease as difficult to cure and adds that the patient

rarely is healed. In particular, its *malodorous* type is highly dangerous: the patient vomits feces, with malodorous belching and expulsion of stinking breath and the whole body smells extremely unpleasant. The writer, according to the hippocratic and galenic tradition¹³ (*Galenus in Hippocratis praedictionum librum I. Commentarius II*) believes that the illness, which causes complete or incomplete obstruction, is due to inflammation of several intestinal parts. Oribasius¹⁴ suggests treatment with drugs, especially made of herbs and administered per os even in the case of vomiting.

Aetius¹⁵ (6th cent.), whose medicine is strictly connected with the work of the Greek physician Archigenes (1st cent. A.D.), also considers the condition as extremely dangerous; he adds that it causes pains in the intestines. The writer believes that the disease is caused irregularities in the diet and especially by eating very fatty foods and drinking abundant cold water, especially when perspiring. He suggest as another possible aetiology the presence of hard feces in the small intestines, palpated by the physician as a hard painful mass; a further theory is linked to the presence of a strangulated hernia which leads to intestinal necrosis. This is the case, Aetius continues, occurring when the intestine, with its contents, falls into the scrotum and then is violently becoming inflamed. Many patients immediately die because of their pains. In other patients, Aetius adds, the inflammation develops to purulency, the intestine immediately bruises, suffers sepsis and falls and the patient dies. According to Aetius, the symptoms include: abdominal pain, belching which does not relieve the patient, borborygmi of the intestines, complete cessation of the digesta and intestinal gas. If the disease evolves, vomiting of bile and phlegm follows, together with coldness of the whole body, increasing pains, difficulty in breathing and, in the stages prior to death, freezing sweat, dysury and, on occasions, vomiting of feces. Aetius¹⁶ includes in the treatment the administration of plentiful drugs, emetics and cathartics per os or by clyster to clean the gastrointestinal system and to release the contents of the intestines. Alexander of Tralles¹⁷ (6th cent.) also suggests a similar treatment.

Paul of Aegina¹⁸ (7th cent.) follows both Aetius and Alexander in the description and aetiology of ileus (he further adds the poi-

soning); he classifies the treatment according to ages (infant, adolescent and adult), concluding that the death of the patient is pitiful because of the vomiting of feces.

Leo the Iatrosophist¹⁹ (9th century) gives a correct pathological interpretation of *ileus*; it is a disease in which, because of the presence of an intestinal obstruction, the feces are not discharged from below but from above (he means from the mouth). Furthermore, he interprets the term *chordapsus* writing that it is a word used in popular speech to indicate the *ileus*.

Theophanes Chryssobalantes²⁰ (incorrectly known as Nonnus, 10th century) faithfully copies the text of Leo, adding that *ileus* is a fatal disease caused by the interruption of the digestion, to an obstruction of the intestines caused by the feces, to the inflammation of the intestines and to a *colic diathesis* (disposition). The writer recommends, especially for children suffering from this illness, inunction, poultices and warm compresses, while for adolescents and adults he adds phlebotomy, cups on the abdomen and clysters. In case of vomiting, he suggests administration of the herb rue and cumin in a solution of oxymeli (vinegar and honey) and purgatives. The writer exactly follows, in his instructions, those of Oribasius²¹ and Paul of Aegina²². Ioannes Actuarius²³ (14th century) attributes the failure of functioning of the gastro-intestinal system to the presence of hard feces, to the inflammation of the intestines, to an injury and humoral influences (obviously harmful) so that gradually the intestines loosen and no longer detain the power to correctly discharge the feces. The writer states that the symptoms of the disease are pains in the intestines, belches moderate at first, which provide moderate relief; but, when the disease deteriorates, cold appears in the lower extremities and warm in the upper, foul-smelling belches which no longer provide relief and vomiting first of liquids and foods and then feces, the latter being a prognostic sign of unavoidable death. Ioannes states that the illness *ileus* is etymologically so-called from the Greek verb εἰλεῖσθαι because of the intestinal twisting.

According to the above descriptions, we can assume that the Byzantine physicians surely had knowledge of some of the symptoms related to an intestinal obstruction, such as bilious

and feculent vomitus, borborygmi, cessation of the feces and gas. Moreover, some of them recognised a correct aetiology of the disease, i.e. the slowed or absent passage of intestinal content and gas because of the intestinal twisting or of an abdominal wall hernia- a factor now understood as a frequent cause of the disease²⁴.

Cases of Intestinal Obstruction in Non-Medical Byzantine Sources

In non-medical Byzantine literary sources some cases of intestinal obstruction can be identified.

1. Empress Theodora (1042 and 1055-1056)

The Empress Theodora was the last descendant of the glorious Macedonian dynasty which was founded by Basil I the Macedon. Theodora reigned in 1042, together with her sister Zoe Porphyrogenitus, after the removal from the throne and the blinding of Michael V Calaphates (1041-1042), adopted nephew of Zoe and with her second husband Michael IV Paphlagon (1034-1041). She reigned alone during the years 1055 and 1056- after the death of Zoe's third husband Constantine IX, Monomachus (1042-1055)²⁵.

Theodora was well known for her strong constitution and excellent appearance and no diseases are referred to in her case, according to the scholar, philosopher and courtier, Michael Psellus²⁶, who left a meticulously-drawn description of the activities and life of the emperors in the 11th century

Theodora, at the age of seventy-six, suffered from a disease which proved fatal. Psellus²⁷ writes that this disease was very unpleasant and caused complete cessation of the feces, loss of appetite and vomiting. An explosive outlet of the contents of the intestines with diarrhoea followed, in consequence of which she died. In spite of the excellent description provided by Psellus, who studied and practiced medicine, he does not give a name to the disease, for unknown reasons. On the contrary, Ioannes Zonaras²⁸ writes that Theodora suffered from a dangerous called *ileus* by her physicians. No hopes of saving her are reported; this is the reason why, the imperial entourage considered the question of the succession. The chroniclers Ioannes Scylitzes²⁹, Georgius Ce-

drenus³⁰, Michael Glykas³¹ (11th cent.) and Ioel³² (13th cent.) also directly attribute Theodora's death to the *disease of ileus*.

From the narration of Psellus, we can say that the Empress Theodora died from intestinal obstruction of unknown aetiology. Perhaps it was incomplete, and so an explosive bout of diarrhoea followed as a reflective evacuation of the intestine below its obstruction³³. The Empress obviously died from the consequences of the disease (dehydration, metabolic or electrolyte abnormalities, toxaimia, sepsis and finally shock, well-known causes of death in the intestinal obstruction)³⁴. We can be sure about the diagnosis, because, on one hand, Psellus provides a characteristic clinical picture of *ileus* and, on the other hand, many chroniclers provide the name of the illness without describing it. The continuous crises of dysentery which Guiland³⁵ refers to in Theodora's case do not seem according to the evidence of Byzantine literary sources, nor does the opinion of the great Byzantinologist and surgeon G.Schlumberger³⁶, who ascribes her death to acute appendicitis.

As regards the treatment of the Empress Theodora, the historians and chroniclers do not give any useful information. We could suppose that the treatment was a conservative one, as recommended by the most eminent Byzantine physicians.

Furthermore, it seems that the Byzantine later physicians did not cure the disease by a surgical operation: this could be the reason why no mention of a relevant attempt is made in Theodora's case. Indeed, no one between the Byzantine physicians, not even Paul of Aegina, who is well known for his original surgical descriptions³⁷, suggests surgical treatment of ileus, despite the fact that today intestinal obstruction is a common problem in surgery³⁸. However, the information provided by Byzantine physicians about the fall of the intestine after its necrosis in the case of strangulating hernia shows that they perhaps knew the illness from the surgical operations in scrotal and inguinal hernia as described by Paul of Aegina³⁹ (and indirectly shows that the Byzantine surgeons sometimes intervened in cases of intestinal obstructions). Another possible explanation is that they observed the necrosis of the intestine in post mortem examinations, the evidence of which is present throughout all the Byzantine period⁴⁰.

In the earlier literary Byzantine bibliography, two other cases of intestinal obstruction have been found:

2. Tiberius I Constantine (578-582)

The Emperor Tiberius I Constantine (or Tiberius II) of Byzantium was recorded by historians for his interest in the organisation and administration of the state; he was also famous for his victorious battles against the Persians in the east and for his peace efforts with the Langobards in Italy⁴¹. The death of Tiberius is attributed to a gastrointestinal disease caused - according to many chroniclers, such as Theophanes⁴² (8th cent.), Leo Grammaticus⁴³ (10th cent.), Georgius Cedrenus⁴⁴ (11th cent.) and Ioannes Zonaras⁴⁵ (11th cent.) by eating rotten or poisoned mulberries. Theophylactus Simocattes⁴⁶ (6th cent.), a reliable historian who is the nearest to the epoch of the Emperor, provides us with noteworthy informations. He writes that the Emperor had a disease, during which another illness occurred, *black bile as the physicians usually call it*: it which was the cause of the Emperor's death within three days. Obviously, the historian means the vomiting of black bile, a symptom which possibly coincides with the vomiting of bile and feces in the case of intestinal obstruction.

The later physician and chronicler Bar Hebraeus⁴⁷ (13th cent.) directly attributes the death of Tiberius to an intestinal obstruction. He writes in his *Chronography* that the Emperor, in the fourth year of his reign, suffered from *a disease in the belly and constriction of the bowels*, a situation which obviously led to an intestinal obstruction.

Guiland's⁴⁸ hypothesis that a liver disease of Tiberius was the cause of his death was obviously linked to the chronicle of Theophylactus Simocattes, referring to the presence of the *black bile*. The eminent Byzantinologist possibly combined this symptom with a liver disease, also if, according to the hippocratic humoral theory the liver corresponds to the yellow bile.

3. Patriarch Anastasius (730-754)

The death of the Patriarch Anastasius was attributed by Theophanes to *ileus*. The chronicler⁴⁹ writes that, in the year 6245 (A.M.=Anno Mundi, corresponding to 736-737 A.D.), Anastasius

died from a pitiful disease which is called *chordapsus*; he refluxed feces from his mouth- a punishment of divine justice- because he illegally had ascended the Patriarchal throne.

From the above historical elements we could deduce that the case of the Emperor Tiberius is the oldest one; for this reason, the information about his death in the historical texts - almost all of them dating later than the historical event - is obscure. There are, however, two significant historical texts which clarify the topic. The first is the *History* of the reliable contemporary writer Theophylactus Simocattes, who describes the vomiting of black bile; the second is the *Chronicle* of the later physician Bar Hebraeus, who, probably basing on ancient historical sources, directly attributes the Emperor's death to an intestinal obstruction. The other two cases, the one of the fatal diseases of Patriarch Anastasius and the other concerning the Empress Theodora, are diagnosed as *ileus* by the historical sources. Theophanes' contemporary chronicle attributes, without reservations, the death of the Patriarch to *chordapsus* and furnishes a clear description of a quite characteristic symptom (vomiting of feces).

In conclusion, the study and analysis of the clinical descriptions, the aetiology and the treatment of the intestinal obstructions as attested by the Byzantine physicians from early to late Byzantium, reveal that the comprehension of this pathology, although worthnoting in the light of modern concepts, generally remained unchanged. Furthermore, a contemporary literary evidence exists, bringing to light three different historical cases, the study of which supports this conclusion.

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Articoli/Articles

BYZANTINE PSYCHOSOMATIC MEDICINE
(10th-15th CENTURY)

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SUMMARY

Original elements of the psychosomatic medicine are examined by the most important byzantine physicians and medico-philosophers during the 10th-15th centuries. These topics concern the psychosomatic unity of the human personality, the psychosomatic disturbances, diseases and interactions, organic diseases, which cause psychical disorders, psychical pathological reactions, which result in somatic diseases, the psychology of the depth of the soul, the psychosomatic pathogenetic reasons of psychiatric and neurological diseases and suicide, the influence of witchcraft on psychosomatic affections, maniac and demoniac patients. The psychosomatic treatment has a holistic preventive and curative character and encloses sanitary and dietary measures, physiotherapy, curative bathing, strong purgation, pharmaceutical preparations proportional to the disease, religious disposition, psychoanalysis and psychotherapy with dialogue and the contribution of the divine factor. The late byzantine medical science contributed mainly to the progress of the psychosomatic medicine and therapeutics. The saint woman physician Hermione (1st-2nd cent.) is considered as the protectress of psychosomatic medicine.

Important byzantine physicians and medico-philosophers especially during 10th-15th centuries research the psychosomatic unity of the human personality and the psychosomatic disturbances. They note organic diseases, which cause psychical dis-

Key words: Psychosomatic medicine - Byzantine medicine