

Hippocratic views in the treatment of rectal prolapse

G. Tsoucalas¹, T.G. Papaioannou², G.V. Papatheodoridis³, M. Karamanou⁴

(1) University Institute of History of Medicine, Claude Bernard University, Lyon, France ; (2) Biomedical Engineering Unit, 1st Department of Cardiology, Hippokraton Hospital, Medical School, National and Kapodistrian University of Athens, Athens, Greece ; (3) Department of Gastroenterology, Laiko General Hospital, Medical School, National and Kapodistrian University of Athens, Athens, Greece ; (4) University Institute of History of Medicine and Public Health, Faculty of Biology and Medicine, University of Lausanne, Lausanne, Switzerland.

Abstract

Known since antiquity, rectal prolapse was first studied systematically by Hippocrates (460-377 BC) who recognized the predisposing factors and proposed several therapeutic approaches such as defecation positions, manual retraction and specific herbal or mineral based anti-haemorrhagic and pain-killing poultices. Hippocratic medicine avoided invasive surgical procedures probably due to a lack of knowledge in human anatomy. However, Hippocrates' views astonishingly lasted in time, presenting similarities to current medical theories on rectal prolapse. (*Acta gastroenterol. belg.*, 2017, 80, 411-415).

Key words : rectal prolapse, manual fixation, herbal poultices, Hippocrates.

Introduction

Rectal prolapse is a condition in which the rectum, the last part of the large intestine, loses its normal attachments inside the body, allowing it to telescope out through the anus. Both adults (mostly the elderly) and infants could be affected. Rectal prolapse depicts the protrusion of either the rectal mucosa or the entire wall of the rectum (proctentia), a usually painless protrusion of the rectum through the anus canal into the external environment. While this may be uncomfortable, it rarely results in a medical emergency. However, it can be quite embarrassing creating barriers in daily activities, social and sexual life. While the predisposing factors in the development of complete rectal prolapse are not completely understood, poor bowel habits, relaxation of the rectal suspensory ligaments, sliding herniation of a deep pouch of Douglas, and rectal wall intussusception may be included. Also, a series of conditions could be implicated such as chronic constipation or chronic diarrhoea, older age, as muscles and ligaments in the rectum and anus naturally weaken with age, weakening of the anal sphincter, prior injury to the anal or pelvic areas, sexual activity (sex, dildos), damage to nerves, and parasitosis (pinworms, whipworms). Conservative treatment is usually suggested, and patients with a prolapsed rectum should undergo manual restoration. Conservative management is appropriate in selected patients, while surgery (reconstruction, rectopexy and resection, Altemeier procedure, Delorme procedure) could provide a permanent solution. Physical findings in rectal prolapse cases varies from diastasis of the levator

ani muscles, deep pouch of Douglas, redundant sigmoid colon, mobile mesorectum, to an occasionally solitary rectal ulcer. Thus treatment should be individualized (1-4).

Ancient Egyptians and ancient Greeks physicians were familiar with this condition which was firstly mentioned in Ebers papyrus dating back to the 1500 BC. While the earliest clinical case of rectal prolapse has been identified to a male mummy from Antioe in Egypt (400-500 BC), the most thorough description was mentioned inside "Corpus Hippocraticum" by Hippocrates (460-377) and his followers in ancient Greece. Hippocrates proposed a plethora of conservative interventions to cope with rectal prolapse, while surgical procedures were avoided (5-7). In our article, we aim to unveil the available knowledge concerning rectal prolapse in "Corpus Hippocraticum" and to summarize the proposed treatment. All medical literature saved in TLG (Thesaurus Linguae Graecae) was examined, using as search terms the ancient Greek words "ἀρχός", the ancient Greek nomination for the rectum (ἀρχός = the rectum), and the word "ἔδραν", meaning the area of the anus (ἔδραν : the anus area) (8).

Predisposing factors of rectal prolapse in ancient Greece

Although it must have been a rather rare condition, a series of predisposing factors for the development of rectal prolapse were recognized by ancient physicians. Ancient Greeks was an ethnic group with predilection towards sexual attraction to male partners (male to male) even if female partners were available (9). Homosexuality and pederasty were somehow common customs in ancient Greece, presenting activities that could cause a degree of rectal prolapse. In many aspects of the daily life the sexual activity between males were more than obvious (Fig. 1). In "gymnasiums" (gymnos = naked) the trainers were naked, in athletic games all participants were also naked provoking an erotic essence, while in

Correspondence to : Marianna Karamanou, University Institute of History of Medicine and Public Health, Avenue de Provence 82, CH-1007, Lausanne, Switzerland.
E-mail: mariannakaramanou@yahoo.com

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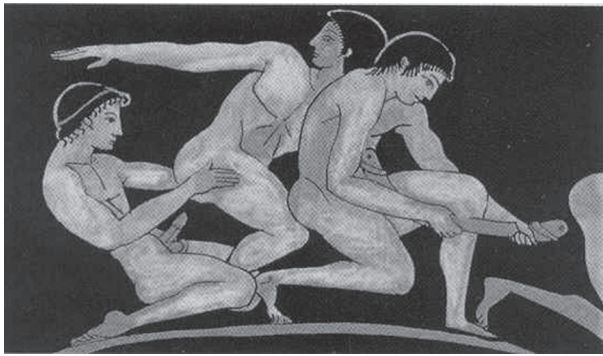


Fig. 1. — Black-red figure depicting an only male orgy in ancient Greece accompanied by dildo play.



Fig. 2. — Attic black-figure oinochoe by the painter Kleisofou and potter Xenocles. It depicts revellers, one of which defecates with intense diarrhoea after an orgy. Athens National Archaeological Museum, A 1045 (ca. 520 BC).

symposiums male orgies were in vogue. In art including pottery, poetry, statuary, wall paintings, mosaics and in mythology (Fig. 2), depictions of male sexual interaction and use of dildos (wooden, stone, marble, metallic, terracotta) of both male and female lovers were frequent (Fig. 3). Pederasty was also a phenomenon that existed as an institutionalized relationship that was part of the aristocratic, male society between an adult male, the “erastes”, and a pre-adolescent boy, the “eromenos” (Greek: έρωσ, eros, was the god of love). Usually, it was “erastes” duty to be the boy’s teacher and protector and serve as a model of courage, virtue, and wisdom to his beloved, in a promise for future moral, intellectual, and physical excellence. Such a relation existed also between an elder philosopher and his pupils (10-11).

Another causal factor for rectal prolapse was the infection with intestinal parasites. Hippocrates observed three different species of intestinal worms: the “elminthes” (Greek: έλμινθες, helminths), the “strogylous” (Greek: στρογγύλοι, a type of round worms) and the “askarides” (Greek: ασκαρίδες, ascaris, round worms). All kinds of parasites could affect infants with the exception of the “strogylous” worms that could have been found in



Fig. 3. — Figure depicting a woman, probably a “hetaira” (a high class prostitute in Ancient Greece) using a dildo.

adults too. According to the Hippocratic view, “pepsis” (Greek : πέψη, digestion) of both milk and blood (sweet substances) inside intestines could provoke caustic pus and the development of a parasitic “skolix” (Greek σκόληκας = worm), causing a cluster of symptoms like diarrheal syndrome, itch, loss of weight and local inflammation, resulting thus in procidentia (12).

Furthermore, the conception of cleansing the body through diet and herbs and the provocation of cathartic diarrhoea, recommended both by public physicians in their infirmaries (Greek : ιατρείον) and by priests inside Asclepieia (the temples of the healing god Asclepius) was an additional cause for the development of rectal prolapsed (13). Although ancient Greeks gave emphasis on healthful living habits in terms of personal and public hygiene, this could not have been always achieved. Thus, personal standards of hygiene varied considerably from one social class to another. In some cases, the poor hygiene of the slaves, and rural populations, the malnutrition during a hard winter, or a war period, or even worse a famine crisis, could cause severe hunger and nutritional barriers, resulting to the consummation of improper foods that could further cause diarrhoeas, muscle and nerve damage of the rectum and anus (14-15).

Finally, intense horseback riding during war campaigns (long war clashes between ancient Greek city-states) could provoke disorders of the posterior pelvic floor, causing rectal prolapsed (16) (Fig.4). Having under consideration all the above mentioned, we may assume that a plethora of predisposing factors for the formation of rectal prolapse were recognized in ancient Greek medical literature.

Rectal prolapse in ancient Greece: definition, treatment and complications

Hippocrates mentioned an abnormality of the anus as “ekripti arhos” (Greek : εκριπτη άρχος), when through the anus falls out the first anatomical part of the



Fig. 4. — Rider a member of the Hippeis (ancient Greek war cavalry) with birds and a winged figure, perhaps the goddess Nike (Victory), Lakonian black-figured kylix, ca 550-530 BC.

intestines (maybe in the Hippocratic era “arhos” was not the end of the gastrointestinal tract, but the beginning - ἀρχός = the leader = the first part).

He had proposed two external minimal interventions to treat the prolapse and a series of conservative treatments based on herbal and animal poultices. A surgical intervention was never proposed inside “Corpus Hippocraticum” (17).

Concerning the external minimal interventions practised in the Hippocratic era, in “Corpus Hippocraticum” is stated : “If there is a drop (the term drop is used instead of prolapse = fall out) in the rectum, push it back in with a soft sponge, anoint it with snail-medication, tie the person’s hands and suspend him for a short time, and it will go in” (Greek fragment: Ἦν δὲ ὁ ἀρχός ἐκπίπτῃ, ἀνώσας σπόγγω μαλθακῷ, καὶ καταχρίσας κοχλίῃ, τῶν χειρῶν δήσας, ἐκκρέμασον ὀλίγον χρόνον, καὶ εἴσεισιν). If the protrusion was greater and the rectum was left outside, Hippocrates had proposed the application of the following method for retaining the rectum in place : “You must place a zone around the flanks, then tie behind this band a cord (or halter), push the rectum inwards, and place a soft sponge soaked in warm water mixed with cooked sawed lotus (name of many plants, the ancient Greek lotus was a species of lucerne, Greek: τριφύλλι, Latin: trifolium melilotus) and with this watery mixture you have to wash again and again the rectal mucosa, squeeze with the sponge the gut inside the rectum, and then pass the cord between the thighs and tie it in the umbilicus level (anterior knot)” (17). When the prolapse was fixated, or in the case of a moderate condition of dropped intestine, he had suggested : “for a complete remedy of the rectum’s drop, you have to rub this part with ground

dry raisins (dried grapes)” (Greek fragment: Τὴν ἔδρην ἐμβάλλει ἀσταφίδι λείῃ, τετριμμένη ξηρῇ, ἐπαλείφειν τὴν ἔδρην. The term “ἔδρην” corresponds to the term “ἔδραν” meaning the anus area in the ancient Greek Ionian dialect) (18). Hippocrates realized that diarrhoea and even the normal defecation could both worsen the prolapsed and he proposed a specific way to defecate : “When the patient wants to defecate, he must sit in an as possible as narrower pierced chair, if he is a child he will be placed between a woman’s legs with his back rested on her knees. While he defecates, the patient would open his legs, as in this manner the protrusion of gut is too small”. (Greek fragment : Ὅταν δε θέλῃ ἀφοδεύειν, ἐπὶ λασάνοισιν ὡς στενοτάτοις ἀφοδεύετω ἢ δε παιδίον ἢ, ἐπὶ γυναικός τῶν ποδῶν, πρὸς τὰ γούνατα προσκλιθεῖς. Ὅταν δε ἀφοδεύῃ, τὰ σκέλεα ἐκτεινάτω) (17).

Emphasized in clinical observation, the physicians of the Hippocratic School recognised a cluster of complications that could affect the sufferers. Thus, they had recommended ways of treating the flow of impure liquids, serum and pus, the haemorrhage, the persistent pain (without inflammation as they noted), and finally the inflammation of the perianal area. As an anti-haemorrhaging method, Hippocrates had suggested : “Take the wrist of the Hemlock plant (Greek : κώνειο, Latin : herba conii maculati), then pound it and pour over it white aromatic wine, then lace this warm poultice locally” (Greek fragment : Ἄλλο κωνεῖο καρπὸν τρίβοντα, παραστάζειν οἶνον λευκὸν εὐώδεα, ἔπειτα καταπλάσσειν χλιηρόν). In patients suffering from unbearable pain he had recommended: “Bake red nitro (alkaline mineral), then blend it well with alum (soil containing possibly aluminum and hydrochloric acid), roasted salt, pound them all together by mixing these ingredients equally, then mix them again with the best tar (a caustic black mineral) you have, then brush a rag with this mixture, place it on the rectal mucosa and held it steady with a bandage” (Greek fragment: Λίτρον σπήσας ἐρυθρόν, καὶ τρίψας λείον καὶ στυπηρίην, καὶ ἄλας φώξας, καὶ τρίψας λείους, συμμίξαι ἴσον ἐκάστου εἴτα πίσση ξυμμίξας ὡς βελτίστη, ἐς ράκος ἐναλείψας, ἐντιθέναι καὶ καταδεῖν). In cases of severe inflammation, Hippocrates proposed mandrake as the best local treatment : “You get the root of the mandrake (mandragora, an endemic plant in Thessaly region, Greece), green if possible, otherwise dry, wash the green root, cut it into pieces, boil it with diluted wine and use it as a poultice. The dry root clobber it and use it as a poultice too” (Greek fragment : Μανδραγόρου ρίζαν μάλιστα μὲν χλωρὴν, εἰ δε μὴ, ξηρὴν, τὴν μὲν οὖν χλωρὴν ἀποπλύναντα καὶ ταμόντα, ἐνήναι ἐν οἴνω κεκρημένω, καὶ καταπλάσσειν τὴν δὲ γε ξηρὴν τρίψαντα καταπλάσσειν ὁμοίως) (17).

Discussion

Ancient Greeks believed in the significance of the human’s body perfection, for males and females (19).

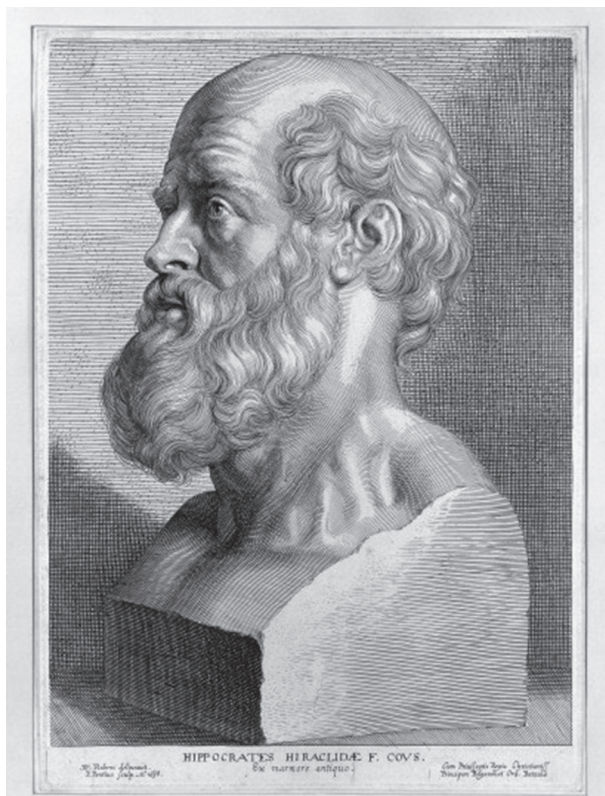


Fig.5. — Bust of Hippocrates (460-377 BC)

Rectal prolapse was considered as the disfigurement of the body's harmony, and a cause of bad hygiene. Hippocrates, a specialist in observation, trained inside Asclepieion of Kos (20-21), was the first to write about procidentia, proposing ways to treat it (22-25) (Fig.5). The physicians of the Hippocratic School were avoiding surgical procedures and they recommended herbal medicine, suppositories and fumigation (13). It is uncertain if they had feared about the massive haemorrhage (much heavier than operating haemorrhoids), or the unbearable pain in case of cauterization, or the appearance of an infection.

Several researchers wrongfully suggested that the Hippocratic method for the retraction of the fallen out intestine, the "dropped intestine" as it was named by Hippocrates, included the intense shaking of the hanged patient (26-30). Nowhere in "Corpus Hippocraticum" was mentioned such a procedure. There is a possibility that someone started this false belief by mistaking the ancient Greek term "εἴσεισιν" (eiseisin) with the word "σεισῖς" (seisis). Although the word "σεισῖς" means the rapid intense shaking, the term "εἴσεισιν" means "get in" (Greek : εισέρχομαι) (8). On the other hand, the "Hippocratic shaking" (Greek : Ιπποκρατική σεισῖς), was used for the prolapse of the uterus in ancient Greece (Hippocrates : On the Nature of the Woman, Greek : Περὶ γυναικείης φύσεως) (22). Women were subjected to swift shaking (succussion), a practice of tying a woman upside down by her feet to a fixed frame and bouncing her repeatedly until her prolapse was reduced

(31-32). Someone may assume that since this method was concerning the retraction (partial or complete) of a prolapse, the same method could have been used for procidentia. However, we must once more emphasize that this is more an imaginary assumption than a written fact and researches should always study the original ancient texts.

The pathophysiology of rectal prolapse is not completely understood or agreed upon nowadays. It is impressive though, that most causes and associated abnormalities for procidentia recognized by modern physicians existed also in Greek antiquity (Table 1). The Hippocratic views surprisingly endured time and several physicians, centuries later remained loyal to ancient beliefs, such as the French surgeon Ambroise Paré (1510-1590), who had exactly the same views (mentioning wrongfully the shaking of the patient, most probably the first mistaken citation in modern era), avoiding surgery (23). Minor surgical intervention was proposed by some physicians in Greek antiquity, but it was the British surgeon Frederick Salmon (1796-1868) who published during 1831 his masterpiece "Practical observations on prolapsus of the rectum" (33-34). Although he had embraced many aspects of the Hippocratic dogma (aetiology, palliation, non-invasive treatment), he was the first to introduce in Western European surgery the excision for the rectal prolapse (two pins fixation- excision of the mucous part) (23, 34). This time gap proves the ingenious thinking of Hippocrates, the medico-philosopher who precluded the scientific initiation of medicine.

Epilogue

Hippocrates has thoroughly dealt with the diseases of the gastrointestinal tract. Those diseases depicted



Fig. 6. — An ancient anatomical votive offering from the 4th century BC from central Italy depicting intestines.

conditions that could cause discomfort, pain, digestive disorders, vomiting, fever, resulting even to death. Votive offerings depicting intestines may suggest that common people understood the significance of the proper function of the intestinal tube in their health status (Fig. 6). Hippocrates noted the condition of the “intestines drop” (rectal prolapse), and systematized its treatment by proposing ways for the prolapse and its complications to be dealt with. He had proposed manually reduction-fixation of the prolapse, local caustic, anti-haemorrhagic and pain-killing poultices and avoided invasive surgical procedures. His views astonishingly lasted in time, presenting similarities to current medical theories.

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