

## REVIEW ARTICLE

# HYSTERICAL APNEA IN THE WORK OF GALEN (CA 129 – 199 AD): GENDER EQUITY IN THE HISTORY OF PSYCHOSOMATIC MEDICINE

DOI: 10.36740/WLek202208118

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## ABSTRACT

**The aim:** To presents clinical, epidemiological and pathophysiological aspects of the disease described by Galenos of Pergamon during the 2<sup>nd</sup> century AD and discusses its implications on contemporary discourse on gender equity and gender – based discrimination.

**Materials and methods:** The authors searched original medical texts written in Greek language and attributed to Galenos for records related to hysterical apnea.

**Conclusions:** Galen attempted to interpret hysterical apnea by combining clinical and epidemiological observations with anatomical and functional lesions. His approach denounced the anatomically unsound notion of the wandering womb and availed the knowledge of his period in a rational manner. Investigating gender – related aspects of contemporary psychosomatic conditions related to fertility and pregnancy can help address gender – based discrimination in modern societies.

**KEY WORDS:** Hysteria, apnea, uterus, infertility, gender equity, psychosomatic medicine

Wiad Lek. 2022;75(8 p1):1920-1923

## INTRODUCTION

Psychosomatic medicine constitutes a holistic framework for the understanding of the effect psychological factors on physical health. The rise of the biopsychosocial paradigm in opposition to the strict biomedical perception of health and disease marked the last decades of the 20<sup>th</sup> century. In this frame, the interaction between psychological stressors and physical illnesses were emphasized [1]. Nowadays, psychosomatic medicine is a recognized field of medical research and/or an accredited medical specialty in several countries including Switzerland, Germany and Austria [2]. However, the history of psychosomatic medicine in quite longer and its inception can be traced to the Greco-Roman antiquity, and particularly to the writings of Galenos of Pergamon (ca. 129 – 199 AD) [3].

Galenos, also known as Galenus or Galen, was a physician of Greek origin who practiced Medicine in the broader Mediterranean region, primarily in Pergamon (minor Asia) and Rome (Italy). He was an avid writer; whose written works were studied for centuries and shaped the practice of Medicine during the medieval years and the renaissance. His classification of diseases includes the diseases of passion, which can be considered as an equivalent of psychosomatic conditions. In fact, the galenic term passion was quoted as a source of either

disease or cure in doctoral dissertations and medical classifications dating until the early 20<sup>th</sup> century [4]. A “disease of passion” with particular interest stemming from the involvement of multiple body systems in its pathogenesis is hysterical apnea.

Hysterical apnea, also known as hysterical suffocation, pertains to respiratory dysfunction due to emotional distress. While apnea describes the cessation of inhalation, hysteria has more complicated origin and meaning. As a medical term, hysteria used to encompass a wide range of dissociative, somatoform, and conversion disorders in the Diagnostic and Statistical Manual of Mental Disorders until the 1990’s [5]. Although it is obsolete as a medical term, it is still used in a variety of lay contexts to describe loss of sentimental control oftentimes accompanied by marked vocal and physical symptoms. Although associated with mental health, the term hysteria derives from *hysteriaia*, the ancient Greek term for the uterus. This connection can be traced back to the belief that psychological distress among females was the result of uterine disease [6]. On these grounds, hysterical apnea describes a psychological condition with corporeal origin and manifestations. The attribution of the organic pathogenesis to the female genital system illustrates a gender – based perception of psychosomatic medicine in the antiquity.

## THE AIM

This paper presents excerpts from the treatises of Galenos describing hysterical apnea. The authors further discuss the social implications of this clinical entity and liaise it with contemporary psychosomatic research and social health sciences.

## MATERIALS AND METHODS

The authors searched original medical texts in Greek language attributed to Galenos of Pergamon. The search focused on excerpts including potential references to hysterical apnea, its etiology, manifestations and management. Passages were selected based on the following criteria: 1) the attribution of authorship of the passage to Galen, as part of a known book or volume of his; 2) the survival of the whole or the greatest part of the work under discussion, to allow contemporary researchers to reach safe conclusions about the described condition; and 3) the medical orientation and focus of these passages. Citations were taken from reputed modern editions that are accessible in well-stocked libraries, some of which also include translations of the original Greek text into modern European languages.

## REVIEW AND DISCUSSION

The term apnea is used in a wealth of occasions in the work of Galen. In different books, it is described as paralysis of respiratory organs and vocal cords [7] oftentimes associated with infection [8]. Galen also acknowledges the Hippocratic definition of apnea as an environmental phenomenon – the lack of wind – capable of causing respiratory distress, generating infections and accelerating their spread in the community [9-11].

With regard to the mental sphere, Galen notes that apnea tends to accompany a number of neuropsychiatric conditions including seizures, stroke and hysteria. Because of its presence to these diseases, Galen suggests that in this context the etiology of apnea lies beyond the respiratory system and the vocal cords [12-13]. To justify the term hysteria, pertaining to the womb, he indicates that hysterical apnea affects women in most cases, with phenomenologically similar manifestations being quite rare among men. Among women, those who are childless and are considered infertile and those who do not engage in sexual intercourse are the ones most commonly affected by hysterical apnea [14]. Galen strengthens this claim with a pathophysiological and an anatomical argument. The pathogenesis of the disease appears connected to the accumulation of menstrual discharge rather than to the presence of sperm [15-16]. This has a twofold interpretation; first infertile women or women who do not engage in sexual intercourse and hence have regular uninterrupted menstruation (compared to pregnant women) are more prone to the disease, and second, men who produce sperm seem to be protected from the disease. Anatomically, women with a prolapse of the uterus, have a higher risk to suffer from hysterical apnea. This indicates that uterine mobility is implicated in the manifestation of the disease [17].

Although Galen seems to be the first to provide a combined epidemiological, anatomical and pathophysiological discourse on hysterical apnea, he recognizes that physicians before him were knowledgeable of the matter, but had conflicting opinions. More specifically, it appears that some physicians have only a general understanding of the respiratory manifestations of any disposition of the uterus, while fewer identify uterus – related respiratory distress. Even those physicians, though, seem to confuse apnea with choking [18]

The latter would be inaccurate, since choking indicates internal obstruction of the respiratory tract, rather than a pathogenetic cause laying outside the respiratory system.

Galen has provided a comprehensive approach to hysterical apnea, compared to the knowledge of his time. Instead of communicating speculations about the “passions” generated by the uterus, or superficially examining their respiratory sequelae, his account denotes the respiratory manifestations (apnea instead of choking) of the disease and investigates its etiology. He seeks potential links to other conditions affecting the patients’ cognition, such as stroke and seizures. The reported high frequency of the disease among females, particularly infertile ones, indicates that Galen has collected information about a significant number of people, both female and male, suffering from this or similar conditions. Based on the available knowledge at the time, Galen attempted to outline anatomical and functional causes of the disease in the high – risk demographic. Therefore, he identified the prolapse of the uterus and the accumulation of menstrual discharge as risk factors.

From the passages presented here, it appears that Galen did not entertain the wandering womb theory. According to this hypothesis, the uterus was capable of translocating in different parts of the body, affecting the nerves and eliciting neuropsychiatric conditions such as epilepsy. Although anatomically unsound, this theory has been brought up by texts of the Hippocratic collection and Plato (5<sup>th</sup> – 4<sup>th</sup> century BC). Certainly, the latter had limited, if any, access to anatomical preparations, however because of their influence a large number of physicians and even exorcists during the late antiquity and the medieval period would continue quoting and applying this theory on women with mental health disorders [19]. At the time of Galen (2<sup>nd</sup> century AD), anatomical knowledge had increased grace to dissections performed in Alexandria, Egypt under the auspices of the Hellenistic monarchs and the interaction of physicians with injuries of gladiators and other entertainers [20-21]. Hence, Galen proposed uterine prolapse as a potential anatomical cause.

Galen’s account has comparable aspects to contemporary knowledge. The association between uterine prolapse and mental health dysfunction remains relevant to date, partially as a result of pain, sexual and urinary dysfunction caused by the condition [22]. Dwelling with and seeking treatment for uterine prolapse has a recorded connection with increased level of anxiety, and potentially panic attacks, who can be compatible with the perception of hysterical apnea

in the 2<sup>nd</sup> century AD [23-24]. Similarly, infertility, constitutes also an established cause of psychological distress [25]. Galen rather speculated humoral interactions related to the accumulation of menstrual discharge, however, it is reasonable to perceive infertility as a significant psychological stressor in an era when women were largely regarded as an instrument of procreation [24]. Moreover, obstructive sleep apnea (OSA) has been recently acknowledged as a risk factor for female infertility [26]. While investigating the pathophysiology of this observation, it is possible that more solid links between apnea, stress, hormonal dysfunction and inability to conceive and give birth will be found. On the other hand, it should be noted that OSA is more frequent among males and constitutes also a potential cause for infertility among them [27].

On these grounds, it appears, that Galen's theories have been consistent in identifying high – risk demographics for psychological distress with somatic manifestations among females, but failed to do the same among males. While attributing this to willing or unwilling gender discrimination from the side of Galen would offer an easy explanation, one should be more attentive to the historical context. In the ancient world, infertility was considered as a female ailment [24]. Therefore, infertility would not be consistent with male hysterical apnea as a risk factor. Furthermore, (in)fertility was a key for social validation among women. For all women, from queens to spouses of civilians, infertility would be seen as a liability since an heir would not be produced [28-29]. Hence, psychological distress related to infertility would burden women primarily rather than men, potentially increasing the frequency of psychosomatic symptoms among them. Finally, yet importantly, the attribution of mental disease with organic causes and manifestations (uterus, apnea) would protect women from discrimination and violence stemming from the metaphysical interpretation of their condition. Particularly during the medieval years, women with psychological disorders would often be persecuted as witches [30]. In an era of witch – hunt, galenic medicine could serve as a refugee for women with mental health conditions.

Galen's account of hysterical apnea and its sociocultural context can become source of debate and ethical discourse in contemporary psychosomatic medicine. Appraising the evidence related to psychosomatic conditions primarily affecting females nowadays can help identify social, professional and cultural factors undermining women's health. For instance, more evidence about the mental sequelae of urogynecological dysfunction following birth can support the need for adequate maternity leaves in work – intense environments. This can improve advocacy for health inclusive and health enabling environments. It can also help tackle stereotypes related to females' behavior and working culture and henceforth help address gender – based discrimination. From a historical point of view, contemporary research can search whether recently discovered texts, such as the Basel Papyrus [3], include additional information about the galenic account of hysterical apnea.

## CONCLUSIONS

Galen attempted to interpret hysterical apnea by combining clinical and epidemiological observations with anatomical and functional lesions. His approach denounced the anatomically unsound notion of the wandering womb and availed the knowledge of his period in a rational manner. Investigating gender – related aspects of contemporary psychosomatic conditions related to fertility and pregnancy can help address gender – based discrimination in modern societies.

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**Received:** 02.04.2022**Accepted:** 27.07.2022

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A - Work concept and design, B – Data collection and analysis, C – Responsibility for statistical analysis, D – Writing the article, E – Critical review, F – Final approval of the article