

Correspondence

Endometriosis: Ancient or modern disease?

Sir,

In 2011 we reviewed several aspects of the condition we today call endometriosis. We pointed out that it was only at the beginning of the 20th century that agreement was reached among pathologists that the nests of epithelial cells found in the peritoneal cavity were non-neoplastic in nature and made of endometrial cells and stroma. The introduction of laparoscopy in the early 1960s made it possible to distinguish three different clinical presentations of endometriosis: peritoneal, deep adenomyotic and cystic ovarian and, for this reason, we concluded that endometriosis deserved the appellation of “modern condition”¹. The following year, Nezhat *et al*² described a large number of classic texts from antiquity to the 19th century, containing descriptions of symptoms that they considered as evidence of the description of endometriosis ages ago.

We have now published what we consider a full reconstruction of the history of endometriosis³ and on the basis of this article we believe that we can successfully argue that, whereas some of the women mentioned in classic texts probably had endometriosis, these descriptions cannot be taken as evidence of an early “identification” of the condition. To resolve the dispute as to who identified endometriosis, it is necessary to outline a specific methodological approach⁴. There are three major sources of information into how ancient communities were affected by, and dealt with infirmities: paleo-pathology, analysis of artefacts, and examination of literary texts^{5,6}.

In the case of endometriosis, we can only recur to literary material and ask ourselves whether we want to reconstruct the history of the description of symptoms associated with endometriosis or, alternatively, to trace descriptions of the pathological features we associate with the presence of endometriosis in its various forms, acknowledging that these two options

are not complementary. Given the option to investigate the description in ancient times of symptoms today associated to the disease, or to show when physicians first became aware of the existence of a specific nosological entity, we have chosen the latter approach. The reason is simple: before microscopic investigations became available, searching for descriptions of “reddish/bluish” spots in the peritoneal cavity, chocolate cysts in the ovary, or rectovaginal adenomyoma, would be the only way to determine whether endometriosis had been described. To our knowledge, there seems to be no evidence that in older times anyone described the macroscopic features of endometriosis.

Descriptions of menstrual or cyclic pain cannot be taken as evidence of knowledge of what caused them, given today’s gold standard for the diagnosis of endometriosis: visual inspection, preferably with histological confirmation⁷. Although it has been shown that a complete history and physical examination may aid in the diagnosis and that experienced clinicians can predict the presence of endometriosis in 80 per cent of cases⁷, this is due to an in depth knowledge of symptomatology associated with confirmed endometriosis, not vice versa.

The starting point for solving the dilemma whether endometriosis is an ancient or a modern condition, is defining the expression: “discovering endometriosis”. The word “discovery” may mean to imagine its existence; name it; provide a clinical description of its symptoms; describe it as a separate pathophysiological entity; and find histological evidence of its nature.

We have dealt with the “discovery” (we prefer the word “identification”) of endometriosis in our latest historical article³, where we have evaluated descriptions of the condition we consider “modern” (namely those made after the use of the microscope ceased to be a curiosity and became the key instrument in the hands

of pathologists). This brings us to the middle of the 19th century when a case of adenomyosis was first described.

Here we limit ourselves to answering the question: “is Endometriosis a new disease?” To us the question is ill posed: at all times “new” diseases appear. Sometimes these are the consequence of evolutionary mutations, or these can appear as a consequence of environmental perturbation, or of social change. The ambiguous notion of new diseases should in fact be substituted with that of emerging diseases. A disease can be classified as emergent in at least five different historical situations⁸:

(i) It existed before, had been identified but overlooked because it could not be conceptualized as a nosological entity;

(ii) It existed, but was not noticed until quantitative and/or qualitative changes in its manifestations occurred;

(iii) It did not exist in a particular region before its introduction from other regions;

(iv) It never existed among humans, but affected an animal population;

(v) It represents a completely new nosological entity, because the triggering pathogen and/or environmental conditions did not exist prior to its first clinical manifestations.

In the case of endometriosis, there is no reason to believe that it was not present in the past and indeed Nezhat *et al*² provided ample proof of the description in ancient times of symptoms associated with it. In this sense, it is an ancient disease. At the same time, we do not believe that descriptions of symptoms that are not specific, without any hypothesis on what may cause them, can be taken as an indication that ancient physicians had singled out the existence of a specific disease, as “A disease remains nameless until recognized, described, and named by a medical scientist or medical practitioner”⁹.

In ancient texts numerous mentions exist that the presence of abnormal bleeding is connected with pelvic pain and infertility². It is noteworthy that, up to half a century ago, modern gynaecologists encouraged pregnancy as the best cure for endometriosis. Meigs¹⁰ was the first to come up with this idea. He wrote: “It is the author’s belief that avoidance of endometriosis through early marriage and frequent childbearing is the most important method of prophylaxis.” The concept was used in the approach taken by Garcia *et al*¹¹ in

creating hormonal contraception and is the exact contrary of the recommendation made by Schrön¹², the physician believed by some to have been the first to describe lesions bearing similarities to what we name today endometriosis. In the course of time, knowledge about the anatomy of the female body increased, but it was only in the 18th century, that clinical symptoms observed during the course of a disease were related to the post-mortem findings. Through this process the scientists could affirm that monthly menstruations were responsible for the onset of a disorder which has the characteristics of endometriosis¹³.

The situation is different when calling endometriosis a “modern” disease¹; this adjective does not in any way imply that the condition did not exist in ancient times. On the contrary, it implies that only recently the scientific community began to untangle the complexity of its pathogenesis and the intricate interactions between genetic, epigenetic and molecular factors influencing it¹⁴. This does not exclude that in modern times the face of endometriosis has not changed; possibly with the condition affecting more profoundly today’s women.

In summary, there are three steps leading to the identification of endometriosis: (i) the description of symptoms that may be attributed to the presence of endometriosis and/or adenomyosis; (ii) the microscopic evaluation of lesions (whether from dead houses or from hysterectomy specimens); and (iii) the laparotomic/laparoscopic evaluation with the discovery of typical (haemorrhagic) and later also subtle lesions. Of these, only the two latter steps can identify a “specific condition” and with the exception of the description made by Rokitansky¹⁵ in 1860 and ignored by his contemporaries, agreement on the nature of “mucosal invasions” observed in the peritoneal cavity was not reached until the first part of the 20th century. Thus, endometriosis well deserves to be called a “modern condition”.

Giuseppe Benagiano¹, Ivo Brosens² & Donatella Lippi³

¹Department of Gynaecology, Obstetrics & Urology, Sapienza University, Rome, Italy

²Leuven Institute for Fertility & Embryology, Leuven, Belgium &

³Department of Experimental & Clinical Medicine, School of Sciences of Human Health, University of Florence, Florence, Italy

¹For correspondence:

giuseppe.benagiano@uniroma1.it

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