

Mini Review

Gynecological Disorders Related to Chronic Fatigue Syndrome

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Received: 05/25/2015

Accepted: 06/29/2015

Published: 06/30/2015

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Abstract

Chronic fatigue syndrome (CFS) primarily affects women aged over 40 years, and typically presents with persistent fatigue for more than 6 months, associated with rheumatologic, infectious, and neurological symptoms. Although CFS is characterized as a functional syndrome, due to the absence of an organic cause, there is evidence of a strong correlation between CFS and hormonal factors, particularly those involved in the pathophysiology of chronic anovulation. Gynecological surgeries and endometriosis may also be associated with CFS.

Keywords: Chronic fatigue syndrome; Gynecology

Introduction

Fatigue is a common symptom that affects over 50% of the general population over a lifetime; it is usually self-limiting, and typically considered an expression of some other comorbidity, such as anemia or hypothyroidism [1]. Chronic fatigue syndrome (CFS) describes a disabling fatigue, persistent for more than 6 months, and associated with rheumatologic, infectious, and/or neurological symptoms [1,2]. CFS is a diagnosis of exclusion; other possible causative disorders should initially be considered, and screened for. In clinical practice, routine laboratory examinations enable the exclusion of hypothyroidism, on the basis of normal thyroid stimulating hormone and free thyroxine levels, and of anemia, on the basis of the results of a complete hemogram, which contains hematological parameters including hemoglobin and mean corpuscular volume

(MCV) [3,4]. Despite the psychological factors involved in CFS, it is very important to exclude psychiatric pathologies, such as depressive disorders, through administration of specific questionnaires by trained professionals [5].

The onset of CFS symptoms typically occurs in the perimenopause, with the disorder affecting 70–80% more women than men [6]. The widely accepted characteristics of the disease were first described by Fukuda et al.[7]; these authors proposed the need to evaluate the patient comprehensively, taking into account metabolic disorders and psychiatric disorders, in order to prevent diagnostic errors due to possible similarities between CFS symptomatology and the idiopathic chronic fatigue [7].

For a CFS diagnosis, at least 4 of 8 symptoms associated with

fatigue must be present: loss of memory and concentration; throat pain; sensitivity in the cervical or axillary lymph nodes; myalgia; joint pain without arthritis; headache; poor quality sleep; and malaise after physical activities, that persists for longer than 24 h [8]. As with fatigue, these symptoms must have a defined onset, and have persisted for at least 6 months. CFS comprises signs and symptoms not associated with biochemical changes or structural lesions; it is therefore considered a functional disorder [8]. Zorzanelli [9], in a psychological context, has associated CFS with the female model of success that has dominated Western culture since its rise in the United States after the 1970s. In this model, women seek not only personal success and family, but also career advancement, thereby generating a greater responsibility and commitment. In association with additional factors, including physical factors, this may trigger CFS [9].

Harlow et al. [10] identified the increased prevalence of polycystic ovary syndrome, ovarian cysts, hyperprolactinemia, and hyperandrogenism in CFS patients, highlighting a relationship between CFS and chronic anovulation. It is plausible that anovulation results in a loss of the immunomodulatory effects of progesterone, in the presence of continuous estrogen production. This could result in chronic activation of the immune system, and thus the wide range of signs and symptoms of the syndrome [10]. Veldman et al. [11], describing a case of membranous dysmenorrhea associated with CFS, also suggested anovulatory hormonal dysfunction as an etiology for the disease, based on the total remission of symptoms after discontinuation of combined oral hormone contraceptive [11].

Warren et al. [12] correlates several functional somatic syndromes (FSS) to gynecological surgeries. Frequently associated with FSS, migraine, panic disorder, fibromyalgia, irritable bowel syndrome, chronic pelvic pain, and Sjögren's syndrome were included in this study, in addition to CFS. An overlap between different FSS was identified, secondary to epidemiological associations. Therefore, in addition to gynecological patients that present with chronic, recurrent, and/or intense symptomatology, there is an association between syndromes that do not manifest with pelvic pain and chronic pelvic pain; as such, these syndromes can be considered a risk factor for gynecological surgeries, especially hysterectomy [12]. Boneva et al. [2] also identified a strong association between CFS and pelvic pain not related to menstruation [2], although this symptom is not described in the diagnostic criteria for CFS. The study also suggested a significant relationship between age at menopause and CFS, likely due to reduced endogenous hormone levels in cases of early menopause, especially post-surgically [2]. Previously, Boneva et al. [6] reported that 76% of post-menopausal women with CFS were subjected to hysterectomy [6].

Smorgick et al. [13] emphasize the relationship between endo-

metriosis and FSS, and note that the prevalence of these disorders is variable, despite the correlation between syndromes. Approximately 65% of women with endometriosis present with irritable bowel syndrome, although only 5% of these have CFS, while 4% have fibromyalgia [13]. Boneva et al. [6] also associated endometriosis with FSS, although these authors noted that the incidence of endometriosis is 2.8 times higher in CFS patients compared with a control group; a similar value was reported in 2 previous studies [6].

Conclusion

The diagnosis of CFS should be confirmed only after the exclusion of organic diseases that present with a similar spectrum of symptoms; particular care should be taken to exclude endocrine disorders such as hypothyroidism and psychiatric disorders. In addition to psychological factors, possibly explained by changes to the female model of success after the 1970s, and the consequent "overloading" effect, CFS is associated with other FSS. This association has the potential to further expand the symptomatology of the disorder. Although there is no clear etiology, CFS is associated with hormone disruption and chronic anovulation. However, the majority of studies are retrospective, precluding the identification of the chronological order of events, and preventing conclusions with regard to causality.

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