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BRIEF COMMUNICATION

Granulomatous Mastitis during Chronic Antidepressant Therapy: Is It Possible a Conservative Therapeutic Approach?

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Granulomatous mastitis is a rare benign inflammatory disease of the breast with multiple etiologies such as tuberculosis, sarcoidosis, foreign body reaction, and mycotic and parasitic infections. In contrast, idiopathic granulomatous mastitis (IGM) is characterized by the presence of chronic granulomatous lobulitis in the absence of an obvious etiology. Clinically and radiologically it may mimic breast carcinoma and so awareness of surgeons, pathologists, and radiologists is essential to avoid unnecessary mastectomies. Cases of IGM are reported during antidepressant therapy in patients also showing high levels of prolactinemia. In these cases, we believe that surgical excision must be avoided being replaced with a conservative management of the pathological condition based on a corticosteroid treatment.

Key Words: *Antidepressant therapy, Hyperprolactinemia, Idiopathic granulomatous mastitis, Selective serotonin reuptake inhibitors*

INTRODUCTION

Idiopathic granulomatous mastitis (IGM) is an uncommon disease which usually arises in premenopausal women shortly after their last childbirth. Its etiology is unclear, however, breast-feeding and the use of oral contraceptives could exert an influence in its pathogenesis [1]. An autoimmune mechanism has also been proposed [2]. Very often clinical and radiological findings mimic multifocal breast cancer [3] and the diagnosis is made by histopathology. Etiopathogenesis of IGM often involves an inflammatory mechanism which could be resolved by the administration of corticosteroids or methotrexate, negating the requirement complete surgical excision.

Cases of IGM are related to the chronic use of selective inhibitors of serotonin reuptake (SSRI) during antidepressant therapy are underestimated and should be treated with non-surgical therapeutic approaches.

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HYPOTHESIS: SSRI COULD ALTER PROLACTIN SECRETION LEADING TO GRANULOMATOUS MASTITIS

The etiology of IGM remains unclear. The postulated causes have included autoimmune diseases such as granulomatous thyroiditis, granulomatous prostatitis, granulomatous orchitis, immune response to local trauma, local irritants, undetected organisms such as viruses, mycotic, and parasitic infections, hyperprolactinemia, diabetes mellitus, alpha-1 antitrypsin and the use of oral contraceptives. Interestingly, it has been reported that antipsychotic therapy can be associated with hyperprolactinemia [4] and that the onset of breast enlargement can occur during chronic antidepressant therapy [5] suggesting a possible side effect of SSRI. In particular SSRI could exert a perturbation in dopamine secretion, counteracting its role in repressing prolactin gene expression, leading finally to hyperprolactinemia and associated IGM. In this regard, it seems worthy of noting the findings about a functional crosstalk between serotonin and dopamine receptors [6,7].

In our opinion, surgical excision of the lesion is not necessary in cases of antidepressant therapy-related IGM, and where possible, a conservative approach based on administration of an antiinflammatory therapy is favored.

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EVALUATION OF HYPOTHESIS AND DISCUSSION: ANTIDEPRESSANT THERAPY-RELATED GRANULOMATOUS MASTITIS DOES NOT REQUIRE SURGICAL INTERVENTION

There is no clear clinical consensus regarding the ideal therapeutic management of IGM. Histopathological confirmation, combined with exclusion of malignancy and other causes of granulomatous disease, is of great importance in guiding clinical decision making and preventing inappropriate and unnecessary treatments.

A retrospective study by Erhan et al. [8] reviewed 18 women with clinicopathologically confirmed IGM treated with excisional biopsy. In patients with delayed wound healing or recurrence after excisional biopsy, or those who have had an incisional biopsy only, if prolactin level was normal, reexcision and oral prednisone usage may be curative. In patients with a high prolactin level and who had recurrence, medical treatment to control prolactin levels may be the correct course of therapy. This study seems, therefore, to underline an unexpected and underestimated prognostic value of blood prolactin levels, which could exert an interesting role in the recurrence of IGM.

As hyperprolactinemia can be induced by SSRI [9,10], whose chronic use can cause GM, in these particular cases the ideal management of patients is not surgical excision, given that lesions are not malignant, but are probably caused by an hypersecretion of prolactin by the pituitary gland related to alteration of serotonin/dopamine metabolism. If this pathogenetic hypothesis is validated it could be reasonable to propose a suspension of SSRI therapy to monitor the evolution of breast lesions, which would regress spontaneously, or alternatively, a therapy aimed to control prolactin blood levels and/or to modulate inflammation could be achieved.

CONCLUSION

IGM raises important diagnostic and therapeutic dilemmas, as more than 50% of the reported cases are initially mistaken for breast carcinoma [11]. Occasionally some patients may be subjected to mastectomy as a consequence of a false positive fine-needle aspiration cytology (FNAC) result, as has been previously reported [12]. The practice of performing mastectomy merely on the basis of triple assessment (clinical, mammographic, and FNAC findings consistent with malignancy), therefore, does not seem to be necessarily justified.

In this paper we emphasize the importance of diagnosis of IGM, which in the non malignant forms should not be treated surgically. In particular we draw attention to cases of IGM related to antidepressant (SSRI) therapy, postulating that these clinical scenarios must also be approached conservatively.

CONFLICT OF INTEREST

The authors declare that they have no competing interests.

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