

Carta al Director

PROLACTIN AND THE HUMORAL IMMUNE SYSTEM, IS THERE A RELATION?

Sir:

Great controversy exists in these moments in the relationship between prolactin and the immunity¹. Some works have studied the relationship between the hyperprolactinemia and the systemic lupus erythematosus with contradictory results². Prolactin is a peptide that can activate leukocytes and fibroblasts. The objective of our work is to determine the presence of anti-nuclear, anti-microsomal and anti-thyroglobulin antibodies in hyperprolactinemic patients.

Twenty-eight hyperprolactinemic patients were studied. Prolactin was measured by radioimmunoassay (Clinical Assays, Stillwater, MIN), and anti-nuclear, anti-microsomal, anti-thyroglobulin antibodies by hemagglutination using commercial kits (SERODEA AMC and SERODEA ATG, Fujinebio, Inc., Tokyo, Japan).

The patients (25 women, 3 men) had a mean age of 45.52 ± 9.61 years. The mean levels of prolactin were 159.3 ± 59.6 ng/ml, the etiology of hyperprolactinemia was microprolactinoma and macroprolactinoma. In all patients anti-nuclear antibodies were negative. In two patients anti-microsomal antibodies were positive, one presented a microadenoma (titer anti-microsomal 1:400) and another idiopathic hyperprolactinemia (titer anti-microsomal 1:100). Another patient with a microprolactinoma had positive anti-thyroglobulin antibodies (1:25,600). Overall, only 13.04% of the patients with hyperprolactinemia had positive titers anti-thyroid antibodies.

It is suggested that mild hyperprolactinemia is to risk factor for the development of autoimmunity. In systemic lupus erythematosus, prolactin appears to favor the production of antibodies³. Prolactin receptors have been identified on the membranes of white blood cells; furthermore, lymphocytes

have been shown to secrete prolactin. Cyclosporin A directly competes with prolactin for binding to these receptors. This may be one mechanism of the immunosuppressive action of cyclosporin A. Prolactin constitutes a stimulatory link between the neuroendocrine and immune systems. Most of the published studies make reference to the association between the hyperprolactinemia and systemic lupus erythematosus, but studies relating thyroid autoimmunity and hyperprolactinemia are limited⁴. In our study the prevalence of anti-thyroid antibodies is similar to the general population (13%)⁵. In this study the prevalence of thyroid autoimmunity in women was of 13% and in males of 3%, in our population 90% was women, the prevalence is similar.

In summary hyperprolactinemia was related with autoimmunity in systemic lupus erythematosus, however in the thyroid autoimmunity, the relationship is not so clear.

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