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Macroprolactinemia: Is it really a relief?

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Editor, Comité Editorial

In this issue of the journal, Rodríguez Carranza, et al. present a series of 14 women with mild hyperprolactinemia (about 80 ng/ml) who had not been treated pharmacologically or who had not responded satisfactorily to dopamine agonist treatment[1]. Surprisingly, eight of them (58%) proved to have a greater than 60% proportion of macroprolactin (macroPRL)[1]. Although such an unusually high prevalence of macroPRL is likely the result of a selection bias, perhaps the most remarkable feature of this study is the finding of menstrual abnormalities and/or galactorrhea in approximately 70% of the patients[1]. This is reminiscent of a previously published study by Hattori, et al. who followed a large group of patients with macroPRL and found that 68% had menstrual abnormalities and up to 40% had galactorrhea[2]. Therefore, it seems that not all patients with macroPRL are asymptomatic. In trying to understand this apparent paradox, we should remember that the ratio of monomeric PRL/macroPRL is not stable. At least two factors influence this circumstance; first, a dissociation phenomenon between PRL and IgG that can release a greater amount of biologically active monomeric PRL[3] and, second, the inability of macroPRL to reach its receptors in the hypothalamus, which can result in a reduction in dopaminergic tone due to a reduction of negative feedback inhibition and, consequently, an increased production of monomeric PRL[3,4]. Supporting this sequence of events, monomeric hyperprolactinemia may develop in a substantial proportion of subjects with macroPRL upon long-term follow up[2].

Then, the fundamental question is whether or not macroprolactinemia is as irrelevant or innocent as most of us think. Often it is, but there are selected populations in whom treatment with dopamine agonists could be indicated, such as in women suffering from infertility or when accompanied by symptoms such as oligo-amenorrhea or galactorrhea. In such circumstances, even if macroPRL is confirmed, we should consider that it may coexist with or be followed by monomeric hyperprolactinemia upon long-term follow up. Thus, the report of Rodriguez Carranza, et al. underscores the need of a more active surveillance of patients with macroPRL.

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