Letters to the Editor

Use of GnRH in preference to LH-RH terminology in scientific papers

Dear Sir,

I was disappointed by your recommendation to use GnRH in preference to LH-RH.

As you probably know, the official journals of the Endocrine Society, *Endocrinology* and *Journal of Clinical Endocrinology and Metabolism (JCEM)* allow the use of both names and abbreviations, i.e. GnRH as well as LH-RH. All the other top journals in this field that specialise in peptides, including *Peptides* itself and *Regulatory Peptides*, and even the prestigious *Proceedings of the National Academy of Sciences* all allow LH-RH and GnRH. The *European Journal of Endocrinology* and other European journals also permit LH-RH.

In our previous articles published in *Human Reproduction* (Emons and Schally, 1994; Reissmann *et al.*, 1994, 1995;
Gonzales-Barcena et al., 1997) the name luteinizing hormone-releasing hormone and the abbreviation LH-RH were allowed. The terminology of gonadotrophin releasing hormone versus original physiological and collaborative clinical studies, it has been the subject of my various articles and Letters to the Editors for the past years (Schally et al., 1971a, 1972; Schally and McCann, 1995; Schally, 1999a). The name luteinizing hormone releasing hormone was not accepted by the Endocrine Society and is not used.

As you know, in 1971 my laboratory was the first to accomplish the isolation, elucidation of structure and synthesis of hypothalamic LH-RH, winning the race with other groups (Baba et al., 1971; Matsuo et al., 1971a,b; Schally et al., 1971a,b,c,d,e,f). Because both natural LH-RH and synthetic decapetide corresponding to its structure possessed major LH-RH releasing as well as LH releasing activity, we put forward a concept that one hypothalamic hormone, designated LH-RH/FSH-RH or simply gonadotrophin releasing hormone (GnRH), controls the secretion of both gonadotrophins from the pituitary gland (Schally et al., 1971d). The expression gonadotrophin releasing hormone was thus first used in our article (Schally et al., 1971d) reporting the structure of LH-RH. The expression gonadotrophin-releasing hormone was used again in another article on confirmation of structure (Nair and Schally, 1972).

The abbreviation GnRH may have been used for the first time in my article on isolation and structure of LH and FSH releasing hormone (Schally et al., 1971a), which was kindly invited by yourselves. The concept formulated by us, that one hypothalamic hormone regulates the secretion of both gonadotrophins from the pituitary gland, is now supported by much experimental and clinical evidence and LH-RH is now accepted as the main FSH-releasing hormone (Schally et al., 1972; Schally, 1999a,b). However, the abbreviation GnRH for gonadotrophin-releasing hormone is confusing, since it is too similar to GH-RH (growth hormone-releasing hormone, for which many agnostic and antagonistic analogues already exist (Schally and Varga, 1999). GH-RH and its analogues are of great importance in many areas of endocrinology and may also be involved in reproductive medicine (Bagnato et al., 1992; Ciampani et al., 1992; Schally and Varga, 1999). Thus, it has been demonstrated that endogenous GH-RH enhances the actions of FSH on granulosa cell differentiation (Bagnato et al., 1992). It was also shown that GH-RH is produced by rat Leydig cell and acts as a positive regulator of Leydig cell function (Ciampani et al., 1992). GH has been used in IVF-embryo transfer methods and agnostic analogues of GH-RH may be also employed. In addition, there are already antagonists of GH-RH, which should have important uses in oncology as tumour inhibitors (Schally and Varga, 1999). The abbreviation GnRH is creating confusion not only in discussion but also in the literature and might even lead to accidents. A few years ago, the Food and Drug Administration sent a memorandum meaning LH-RH or GnRH, but they wrote GH-RH. As a matter of fact, we warned 29 years ago, that the abbreviation GnRH may prove troublesome because it is too similar to GH-RH (Schally et al., 1972) and would lead to a communication failure to clearly distinguish between these two hormones.

Because I led a team that was the first to isolate LH-RH in the pure state, determined its structure, synthesised it, and carried out original physiological and collaborative clinical studies, I believe that I should be allowed to express my views about its nomenclature. Although we were the first to propose the name gonadotrophin-releasing hormone, abbreviated to GnRH in 1971 (Schally et al., 1971a,d), much confusion is caused by this abbreviation for those also working on GH-RH analogues. Thus, I again recommend that the abbreviation GnRH should be discontinued, at least for the analogues, and LH-RH be used instead, as it already is by many investigators. Because this proposal may not be accepted by many of those working in this field, who like convenient abbreviations, at least an option should be given to those who are purists at heart to use the nomenclature based on LH-RH.

References

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