Commentary on “Expression of dopamine 2 receptor subtypes mRNA in clinically nonfunctioning pituitary adenomas”

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In the paper by Su et al. [1], in this issue, expression of mRNA for the two subtypes of dopamine 2 receptor has been evaluated by RT-PCR in operative samples from 72 patients (21 with prolactinomas, 25 with gonadotropinoma, 21 with null cell adenoma, 3 with oncocyoma, and 2 with silent corticotroph adenoma). Two normal pituitaries were also assessed.

The results showed a lower expression of D2L and D2S mRNA in NFPA as compared with prolactinomas, but a minority of the patients (21.6%), mostly gonadotropinomas and null cell adenomas, displayed relatively high mRNA levels.

The very recently published study by Gabalec et al. [2] lends support to the observations of Su et al. confirming the preferential expression of D2R mRNA in gonadotropinomas, however, with significant interindividual variability.

The standard approach to the treatment of NFPA consists of trans-sphenoidal surgery; however, the management of postoperative residual tumor is debated, and no evidence-based indications are present (with both watch and wait and radiotherapy and hormonal therapy options being present) [3].

The observations by Su and Gabalec support future prospective controlled studies aimed at evaluating the differential response to these treatment options (and possibly also to innovative molecules) [4] stratified according to DR2 mRNA expression.

References

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