

Dramatic resolution of a pituitary macroadenoma:
non-functioning or prolactin-secreting?

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Background

Non-functioning pituitary tumours can be associated with a modestly elevated prolactin. Response to dopamine agonist therapy in such cases is unusual. Large macroprolactinomas are associated with much higher prolactin levels and respond well to dopamine agonists.

Case

We report a 41-year-old man with a pituitary macroadenoma associated with an elevated prolactin of around 2000mIU/L who developed marked resolution in his pituitary MRI images radiologically reported as “consistent with post-operative changes”. The patient was in fact on cabergoline treatment and had never had pituitary surgery. Five years previously, he presented with complaints of reduced libido and erectile dysfunction. He had no history of visual problems and no headache. Hormonal parameters were as followings: prolactin 2170 (normal range 86-324) mIU/L, FSH 2.32 mIU/mL, LH 1.84 mIU/mL, testosterone 2.39 (normal range 8.6-29) nmol/L. Pituitary MRI confirmed a pituitary macroadenoma measuring 33 x 26 x 23 mm in diameter. He was commenced on cabergoline and because of inadequate response, dose was gradually increased to 500 mcg six times weekly. A follow-up pituitary MRI showed a resolution of the pituitary tumour which now measured 7 x 7 mm in axial plane (compared to 24.6 x 22.7 mm a year previously). His serum prolactin dropped to 251.6 mIU/L; serum testosterone increased 6.77 nmol/L with an improvement in sperm count.

Discussion

Anatomical response to dopamine agonist therapy in prolactinomas can be dramatic. The case presented is unusual as it probably represents a very good response to cabergoline in a non-functioning pituitary tumour, or a slow response in a partially resistant prolactinoma.