

Defining postoperative values for successful resection of prolactinomas

Clinical pearl

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We, as other authors, have noted that late relapse of hyperprolactinemia following apparent successful adenomectomy in women harboring microprolactinomas is not rare.[1-3]

On retrospective review of a series of tumors treated at the University of Southern California teaching hospitals, we have found that the immediate postoperative prolactin level may be predictive of late recurrence of hyperprolactinemia.[4] It is our routine to ascertain prolactin levels at 3 days and 6 weeks postoperatively. Of 133 patients undergoing microadenomectomy who had 3-day postoperative prolactin levels of less than 10 $\mu\text{g/L}$ (the vast majority of these were less than 3 $\mu\text{g/L}$), 132 or 99% had prolactin levels of less than 20 $\mu\text{g/L}$ at their 6-week follow-up examination. At 5 years postoperatively, 130 (98%) of the original 133 patients still had normal prolactin levels. However, of 43 patients who had 3-day postoperative prolactin levels in the range of 10 to 20 $\mu\text{g/L}$, only 32 (74%) had prolactin levels in the normal range at 6 weeks postoperatively, and only five (16%) of this group of 32 patients had normal prolactin levels at 5-year follow-up review. Therefore, although 18% of patients who have a normal postoperative prolactin level at 6 weeks will develop recurrent hyperprolactinemia when followed for 5 years, only three (7%) of 41 represent patients with immediate prolactin levels of less than 10 $\mu\text{g/L}$, whereas the remainder were in the group with immediate postoperative prolactin levels in the 10 to 20 $\mu\text{g/L}$ range.

These data indicate that the traditional criteria used to determine successful microadenoma resection in the immediate postoperative period (prolactin level of less than 20 $\mu\text{g/L}$) may be too liberal; in our series the patient with an immediate postoperative prolactin of less than 10 $\mu\text{g/L}$ had an approximately 98% chance of long-term chemical cure, and we have yet to see a recurrence of hyperprolactinemia in a patient whose immediate postoperative prolactin level was less than 3 $\mu\text{g/L}$.

References

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