CASE REPORT

Pregnancy with Macroprolactinoma

Shazia Abid, Iftikhar Sadiq, Saira Anwar, Maimoona Hafeez and Fouzia Butt

ABSTRACT

A macroprolactinoma recurred in a 25-year-old lady, who had initially presented with inability to conceive, secondary amenorrhea, galactorrhea and persistent headache. She was diagnosed as a patient of pituitary macroadenoma of 1.7 cm with elevated serum prolactin level. She was given Bromocriptine, which normalized her menstruation as well as the prolactin level followed by conception during treatment. Pregnancy remained uneventful till 27 weeks when she developed severe headache and total loss of vision from left eye and partial from right eye at 27 weeks. MRI showed enlargement of macroadenoma upto 2.5 cm with compression on optic chiasma. Transsphenoidal adenectomy was performed. After surgery visual field defect improved but plasma prolactin level remained elevated. She delivered vaginally at 39 weeks. Later, treatment with Bromocriptine (15 mg/day) failed to keep prolactin level normal and Lisuride hydrogen (0.8 mg/day) reduced the prolactin levels.

Key words: *Macroprolactinoma. Hyperprolactinoma. Adenectomy. Pregnancy. Bromocriptine. Lisuride.*

INTRODUCTION

Prolactinoma is the most common hormone-secreting pituitary tumour. Its exact frequency in the general population is not clearly established. In non-selected surgical series, this accounts for approximately 25-30% of all pituitary adenomas in the United States.[1]

The development of efficacious surgical and medical therapies for pituitary adenomas as well as the improvement of hormone therapy for ovulation induction has made pregnancy possible for women harboring pituitary tumours. However, gestational risk due to the possibility of tumour growth during pregnancy mainly in macroadenoma, raises a concern.[2]

Bromocriptine has a well-established role for prolactinoma treatment before and during pregnancy, even when the symptomatic tumour increase occurs.[2] However, a minority of patients ranging from 10-20% in different series fails to achieve normalization of prolactin level or tumour shrinkage even after treatment with a variety of Dopamine agonists at high doses.[3] This has been considered as partial or complete resistance to the therapeutic agents and sometime massive enlargement of macroprolactinoma makes surgery unavoidable.[4]

We report herein a case of macroprolactinoma in a 25-year-old lady, who initially responded to medication, conceived and then develop rapid enlargement of the macroprolactinoma in pregnancy.

Department of Obstetrics and Gynaecology, Sharif Medical and Dental Hospital, Lahore.

Correspondence: *Dr. Shazia Abid, Qasr-e-Mohammadi, 1268/8 M, Faizi Road, Multan.*
Email : dr_shaziaabid@hotmail.com

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CASE REPORT

A 25-year-old housewife presented at Sharif Medical and Dental Hospital, Lahore, with primary infertility, persistent headache, galactorrhea and secondary amenorrhea for 3 years.

Subsequent investigation revealed multicystic ovaries and elevated prolactin level (2162 ng/ml) with decreased levels of FSH (4.7 mIU/ml), LH (1.2 mIU/ml) and E2 (serum Estradiol level-estrogen) 15 nmol/L. TSH and visual field test results were normal. Pituitary MRI confirmed a 1.7 cm seller lesion with supraseller extension that was consistent with pituitary macro-adenoma.

Bromocriptine was immediately started and within 4 weeks, the prolactin level was decreased to 111 ng/ml. Patient noted the gradual improvement in headache and regular menstruation was resumed. After 5 regular cycles, she was found to be pregnant and was advised to continue her medication.

Pregnancy remained uneventful till 27 weeks, when she developed severe headache followed by total loss of vision from left eye and partial loss from right eye, that was confirmed by defective visual field tests and subsequent MRI showed the enlargement in size of macroadenoma (2.5 cm) with supraseller extention, compression on optic chiasma and involvement of left carotid artery (Figure 1). Transsphenoidal pituitary adenectomy was performed at 27 weeks of gestation at the Aga Khan Hospital with uneventful recovery. Histology of the removed specimen was consistent with a prolactin producing adenoma. She had regular antenatal care after that and delivered a healthy baby at 39 weeks. The baby was top fed as she was advised to take Bromocriptine in maintenance dose to prevent recurrence. During treatment galactorrhea was absent

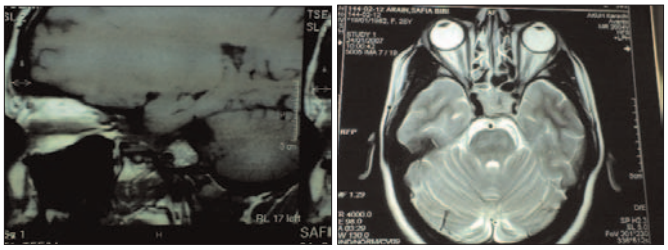

Figure 1: MRI showing suprasellar extension of prolactinoma compressing optic chiasma and involving left carotid artery.

but amenorrhea persisted. Serial prolactin analysis showed hyperprolactinemia despite of regular medication. She was switched over to lisuride hydrogen (0.8 mg/day). The recent most prolactin level was 269ng/ml, almost normal visual field test and no abnormality was detected on recent CT scan.

The case was discussed with neurosurgeon. He advised to double the dose of lisuride with life-long serial prolactin analysis. In case of recurrence radiotherapy would be the treatment of choice for her.

DISCUSSION

Once the diagnosis of pituitary adenoma is made after complete evaluation, patient's education is necessary. Good compliance and better outcome will result, if patient knows the nature of disease, treatment options, duration of therapy, importance of therapy for conception, course of disease during pregnancy along with symptoms caused by enlargement of tumour and postdelivery therapy and importance of follow-up.[5]

The recent availability of new potent dopamine agonist such as cabergoline, quinagolide and pergolide especially in Bromocriptine resistant pituitary adenomas, 75% patients recover within 6 months on lowest serum level.[6]

Surgical treatment is sometime indicated despite excellent medical therapy. The indications for surgery are poor tolerance of long-term medical treatment, progression of visual deficit or recurrence while on medical treatment. In experienced hands, a hormonal and oncological cure can be achieved in more than 90% of patients after transsphenoidal removal of prolactinoma with minimal risk.[7] Recent data shows that both Bromocriptine and Cabergoline are safe during pregnancy.[8] Overall symptomatic tumour growth occurred in 15-35% of macroadenoma in pregnancy.[9,10]

This patient conceived with medical treatment of macroprolactinoma , but rapid increase in size of tumour along with total loss of vision, made the surgery inevitable. Continuous medical treatment after surgery has been helpful in keeping hormones levels within normal limits.

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