

Isolated Hypoprolactinaemia – 2 cases and discussion

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Case reports

Case 1: 38 year old woman of Caucasian origin was referred for sub-fertility. She had one normal childbirth 5 years ago. There was failure to lactate following the child birth. There was some puerperal blood loss, but she resumed normal menstrual periods and had no other manifestations of hypopituitarism. Pituitary profile showed normal results FSH 2.7 (3.5-12.5) IU/l; LH 1.5 (2.4-12.6) IU/L; 9 am Cortisol 305 (171-585)nmol/L/l; TSH (0.4-4.0)2.85 mu/L. Prolactin was 85 (127-637)mu/L. IGF-1 18.6 (9-33)nmol/L. Short synacthen test using 250mcg of synacthen showed a normal response. MRI showed normal pituitary. She had difficulty conceiving second child. Day 21 progesterone suggested ovulation. Few months after being seen in clinic she conceived naturally and is currently expecting her second child. There was no history of recurrent infections.

Case 2: 25 year old woman of Caucasian origin was referred for labile mood and irregular periods. Investigations by her general practitioner had shown low prolactin level on 2 occasions. She has 2 children and had failure of lactation following child birth. Her main symptoms were consistent with mild depression. Her periods were mildly irregular but she had conceived twice naturally.

9 AM pituitary profile was normal with 9 AM cortisol of 550 nmol/L, suggesting adequate pituitary adrenal reserve. She had an MRI of pituitary, which showed no abnormalities. There was no history of recurrent infections.

Discussion

We present two cases of isolated prolactin deficiency with failure of lactation following child birth. Both cases were detected incidentally and referred to endocrinology for evaluation subsequently. Most cases of hypoprolactinaemia are secondary to pituitary tumours/surgery or other pituitary disorders, where other hormones are also involved. There are only occasional case reports of isolated hypoprolactinaemia¹⁻⁵. Literature search reveals 12 cases reported in English language search.

We did not perform TRH stimulation or give anti-dopaminergic agents such as domperidone, given that the first patient was trying to conceive and second patient had mental health issues. Both these women conceived naturally and had no fertility issues. This is consistent with other case reports. Some case reports mention menstrual irregularity, which was present in the second case.

In 2013, Iwama et al⁶ from Johns Hopkins, reported a case of isolated prolactin deficiency. They conducted genetic and auto-immune studies on this patient and provided evidence of antibodies against a subset of prolactin producing cells. They found no evidence of sequence variations in prolactin or other genes involved in lactotroph development. They found no response to domperidone, but the patient responded to recombinant human prolactin.

These two cases add to the literature regarding isolated prolactin deficiency with failure of lactation. Recognition of this rare condition provides insight into failure of lactation in some cases as well as the importance of measuring prolactin levels.

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