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IMAGES IN ENDOCRINOLOGY

Panhypopituitarism and Bifid Uvula

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A 20-year-old Indian male presented with abnormal thyroid function tests and poor development of secondary sexual characteristics. Perinatal history included breech delivery, delayed cry and lower respiratory tract infection. Developmental delays, below average scholastic performance and note of being the shortest child in class were reported.

Examination revealed lack of facial hair, depressed nasal bridge, low set ears, nasal speech, short stature, increased arm span, bifid uvula (Figure 1), sparse axillary and pubic hair (A0 P1), low testicular volume and short phallic length. Combined pituitary hormone deficiency was suspected.

Laboratories show low FT4 (0.62 ng/dl) with normal TSH (3.21 mIU/mL), low levels of 8AM testosterone (<20 ng/dl), LH (0.384 U/L), FSH (0.201 U/L), 8AM cortisol (<1 mcg/dl), serum IGF1 (<20 ng/ml) and repeat FT4 (0.609 ng/dl). Serum calcium, phosphorus, and vitamin D levels were normal. Radiographs showed scoliosis and 11.5–12.5 years bone age. Hypoplastic anterior pituitary with eutopic posterior pituitary bright spot (Figure 2) were appreciated on MRI.

Following guidelines for hypopituitarism,[1] he was given hydrocortisone, levothyroxine and monthly parenteral testosterone. At follow up, he reported improved sense of well-being, decreased fatigability and increased strength with noted progression of pubertal development (A0P3).

Since the hypothalamus, pituitary gland, and oral cavity develop very closely during early embryonic life, defects in one may herald abnormalities in others. Midline defects such as a bifid uvula, has been associated with hypopituitarism.[2] Breech delivery has also been shown to be associated with hypopituitarism.[3] The presence of midline defects along with other risk factors for hypopituitarism should alert physicians to the possibility of pituitary defects to facilitate earlier evaluation and intervention.

Figure 1. Bifid uvula.

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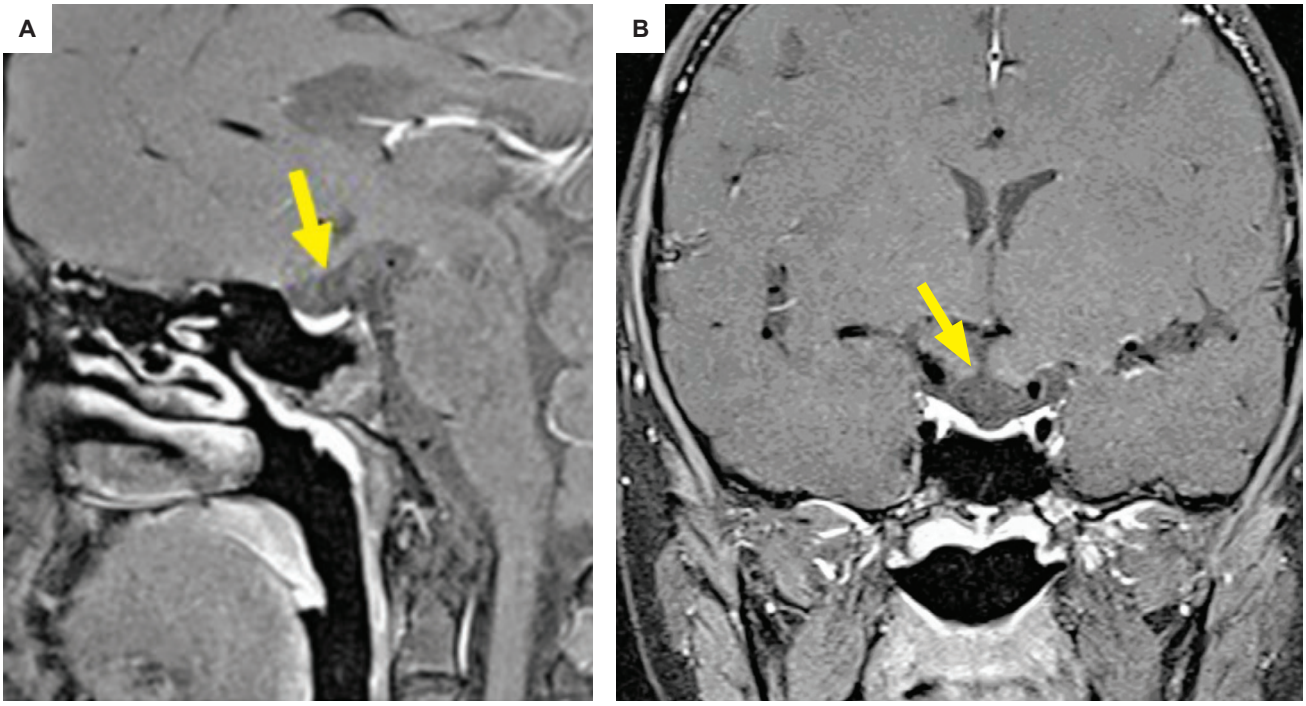

Figure 2. MRI pituitary **(A)** sagittal view, **(B)** coronal view showing hypoplastic anterior pituitary *(yellow arrow)* with eutopic posterior pituitary.

Ethical Consideration
Patient consent was obtained before submission of the manuscript.

Statement of Authorship
Both authors certified fulfilment of ICMJE authorship criteria.

CRediT Author Statement
PS: Conceptualization, Software, Formal analysis, Resources, Data curation. Writing – review and editing, Supervision, Funding acquisition. **AD:** Conceptualization, Methodology, Validation, Investigation, Writing – original draft preparation, Visualization, Project administration.

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