

Spotters

Central precocious puberty due to hypothalamic hamartoma in a 10-month-old infant girl

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A 10-month-old girl presented with bleeding per vaginum for the past 3 days. She had first developed breast enlargement [Figure 1a], followed by the appearance of pubic hair [Figure 1b] and sticky vaginal discharge over the last 3 months. She was born at full term with a birth weight of 2.8 kg with no significant perinatal events. A 1 cm × 0.5 cm capillary hemangioma was noticed on the neck [Figure 1c]. Her length was 77 cm (Z-score: +2.21) and weight was 10.5 kg (Z-score: +1.70). The follicle-stimulating hormone was 3.72 mIU/mL, luteinizing hormone was 2.82 mIU/mL, and estradiol level was 13.00 pg/mL.

Magnetic resonance imaging of the brain revealed a non-enhancing, well-defined pedunculated lesion of size 1.7 cm × 1.6 cm × 1.4 cm with smooth margins located in the hypothalamus (tuber cinereum region), suggestive of hamartoma [Figure 1d (yellow arrow)]. She was started on gonadotropin-releasing hormone analog leuprolide acetate 11.25 mg intramuscular every 84 days. After initiating the treatment, menstruation and progression of breast development ceased.

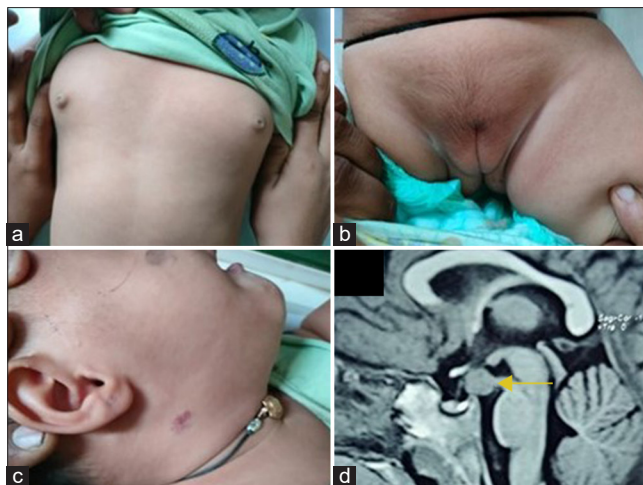


Figure 1: (a) Breast staging of subject, (b) pubic hair staging of subject, (c) capillary hemangioma in the neck, (d) magnetic resonance imaging picture of the hypothalamic hamartoma (yellow arrow).

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Hypothalamic hamartomas (HHs) are congenital, non-neoplastic tumor-like lesions formed by heterotopic gray matter, neurons, glial cells, and fiber bundles located at the base of the brain on the floor of the third ventricle, near the tuber cinereum, or near the mammillary bodies. It is a rare condition, with an estimated prevalence of 1 in every 50,000–200,000 individuals.^[1] The pathogenic and pathological similarities between hemangioma and hamartoma suggest that they are derived from similar embryologic origins, and although rare, their co-existence is known.^[2] The association between capillary hemangioma and HH must be investigated in future studies.

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