Hypothyroidism and hip pain

To the Editor: Slipped capital femoral epiphysis (SCFE) is the most common hip disorder affecting adolescents and has multifactorial aetiology.[1] Hypothyroidism may present as SCFE.[2] We introduce a patient with such a presentation to highlight the association.

A 14-year-old female child visited our outpatient department with a presenting complaint of left-sided hip pain for the last 6 months, after a trivial trauma, associated with restriction of mobility. She had history of developmental delay and mental retardation. She was the product of non-consanguineous marriage with no significant antenatal/perinatal events and a negative family history for hypothyroidism. She had attained menarche 6 months prior to admission. She did not have goiter, polydactyly, facial dysmorphism or opthalamological issues. Her weight was 65 kg and height 142 cm, with a *z*-score of 1.2 and −2.8 for her age, respectively. Her body mass index was 32 kg/m^2. Sonography of the thyroid gland showed normal anatomy. Her liver function tests, renal function tests and abdominal ultrasonography were normal. She had a thyroid-stimulating hormone (TSH) level of ~600 μIU/mL. Her serum follicular-stimulating hormone, luteinising hormone, and prolactin and cortisol levels were within normal limits. Her magnetic resonance imaging (MRI) brain scan was normal. Hip X-ray of the left side showed SCFE (Fig. 1).

Fig. 1. Left-sided SCFE.

She was started on Eltroxin; her hip pain settled and there was an improvement in mobility. Further orthopaedic management of the SCFE is being sought.

SCFE is characterised by displacement of the capital femoral epiphysis from the metaphysis through the physis. In a study of association of endocrinal disorders with SCFE, hypothyroidism was found in 40% of all the cases studied.[3] A high serum TSH level causes abnormal skeletal development in hypothyroidism via its suppressive effects on the growth plate.[4] The delay in diagnosis – as in our case – severely affected the skeleton and mental development.[5] Through this letter, we highlight the importance of early diagnosis of hypothyroidism and the need for a high index of suspicion in obese children with hip pain.

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