

# Treating severe hypothyroidism revealed masked slipped capital femoral epiphysis in 10years old girl

## Case report

We report a 10years old girl with sever hypothyroidism who came to our pediatric endocrinology clinic. Her thyroid functions test shows sever hypothyroidism:

FT4 2.2 C 12.0 - 22.0pmol/L

TSH 500.000 H 0.270 - 4.200mIU/L.

Thyroglobulin Antibody 523 H0-115I

Thyroid Peroxidase Ab 393 H0-34Iu/mL

She has tiredness and fatigue and non-specific symptoms. She was treated with thyroxin and her thyroid functions test normalized in 2months time. After her improvement of thyroid functions test she developed limping and pain in her left leg which get worse with activity. We tested her bone profile and we found vitamin D deficiency so she received treatment for that. But in spite of improvement of the vitamin d deficiency and thyroid disease she continue to have the limping and pain in her leg so we referred her to orthopedics. The orthopedic did for her pelvic AP x-ray and found Bilateral symmetrical slipped capital proximal femoral epiphyses are noted with metaphyseal sclerosis and irregularity. The proximal femoral epiphyses are of normal density and contour Unremarkable acceptable in both sides. So she was treated surgically and cannulated screw fixation was done in both hip joints. After that the patient improved regarding limping and pain and without complaints.

Slipped capital femoral epiphysis (SCFE) is the most common hip disorder in adolescents, occurring in 10.8per 100,000children.<sup>1,2</sup> SCFE usually occurs in those eight to 15years of age and is one of the most commonly missed diagnoses in children. SCFE is classified as stable or unstable based on the stability of the physic. It is associated with obesity, growth spurts, and (occasionally) endocrine abnormalities such as hypothyroidism, growth hormone supplementation, hypogonadism, and panhypopituitarism. Patients with SCFE usually present with limping and poorly localized pain in the hip, groin, thigh, or knee. Diagnosis is confirmed by bilateral hip radiography, which should include anteroposterior and frog-leg views in patients with stable SCFE, and anteroposterior and cross-table lateral views in unstable SCFE. The goals of treatment are to prevent slip progression and avoid complications such as avascular necrosis, chondrolysis, and femoroacetabular impingement. Stable SCFE is usually treated using in situ screw fixation. Treatment of unstable SCFE also usually involves in situ fixation, but there is controversy about timing of surgery and the value of reduction. Postoperative rehabilitation of patients with SCFE may follow a five-phase protocol.<sup>3</sup>

Although plain radiographs are the primary modality used to diagnose SCFE, ultrasound has also been used for diagnosis, staging and follow-up management of SCFE.<sup>4</sup> Key ultrasound findings include posterior displacement of epiphysis with a physeal step, reduced distance between the anterior rim of the acetabulum and the metaphysis, remodeling of the metaphysis and, occasionally, joint effusion.<sup>5</sup>

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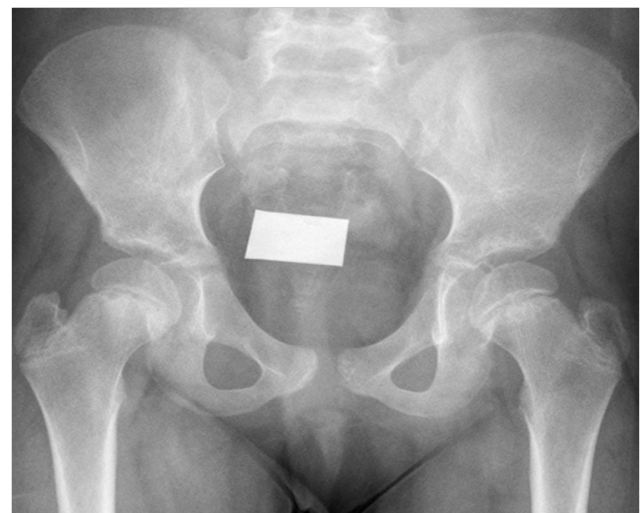
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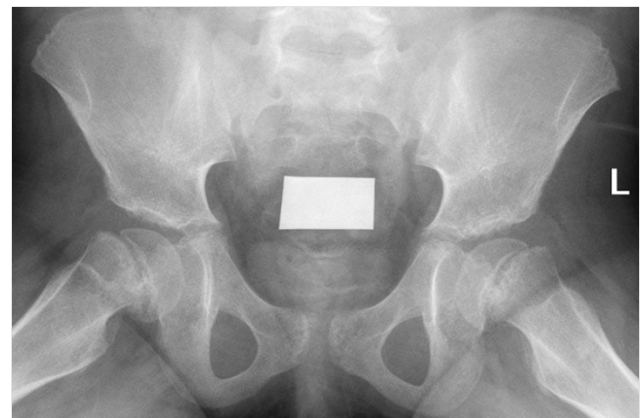
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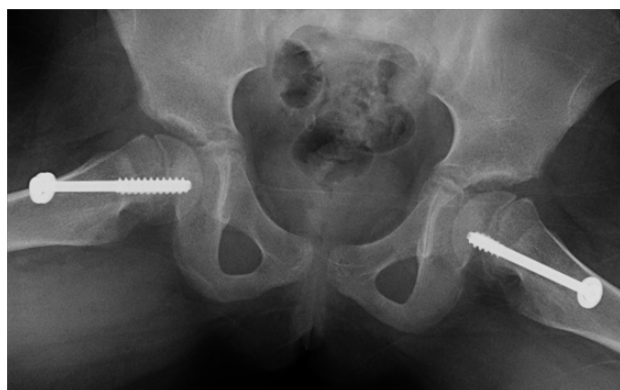
In this case we present that after treatment of the sever hypothyroidism the symptoms of masked SCFE appears indicating that evaluations of thyroid function test is strongly recommended in cases of SCFE (Figures 1–3).



**Figure 1** Slipped capital femoral epiphysis (SCFE) is an important hip disorder of adolescence commonly occurring between the ages of 8–15years.



**Figure 2** Slipped capital femoral epiphysis in 10years old girl.



**Figure 3** Slipped capital femoral epiphysis in 10years old girl.

### Acknowledgments

None.

### Conflicts of interest

The author declares that there is no conflict of interest.

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