Van Neck-Odelberg Disease: A Rare Case Report

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An 8-year-old female patient with no relevant past medical history was referred to the hospital with a left groin pain comprising six months of evolution. There was no history of previous trauma or infection. On clinical examination, no swelling or raised local temperature was observed and the range of motion of both hips was preserved. Radiography of the hips showed a sharp asymmetric shadow at the left ischiopubic synchondrosis with no associated periosteal reaction or soft tissue thickening, as shown in Fig. 1. Magnetic resonance imaging showed a hyperintense signal on T2 with fat saturation and hypointense signal on T1. The clinical and radiological findings were consistent with Van Neck-Odelberg disease.

The patient was treated conservatively with the administration of nonsteroidal anti-inflammatory drugs after which the patient improved and had no symptoms on further follow-up visits after three months.

Van Neck-Odelberg disease is a benign skeletal developmental abnormality seen in children, comprising the hyperostosis of the ischiopubic synchondrosis.[1,2] Its ossification process starts in early childhood, ending just before puberty, and its imaging varies significantly. Only in the presence of clinical symptoms, such as groin pain, the restriction of hip mobility to limping, Van Neck-Odelberg disease can be suggested.

Van Neck-Odelberg disease is hypothesized to be triggered by an excessive pull of the hamstring tendon on the ischial tuberosity as it sets off an inflammatory reaction and delays the union of the cartilage layers and ossification centers.[2]

In Van Neck-Odelberg disease, a plain radiograph of the hip displays shadowing and sclerosis at the ischiopubic synchondrosis that is not associated with a periosteal reaction or soft tissue thickening.

As stress fractures, post traumatic osteolysis, osteomyelitis, or bone tumors may mimic Van Neck-Odelberg disease, they must be excluded so that the disease diagnosis is established.[1-4]

History of trauma, vigorous exercise, fever, inflammation signs of the pelvis, elevated erythrocyte sedimentation rate, and C-reactive protein, abscess, or fluid formation and radiological features (irregularity or erosion of the affected side seen and lytic lesions with soft tissue involvement) are suggestive of a diagnosis different from the benign Van Neck-Odelberg disease.

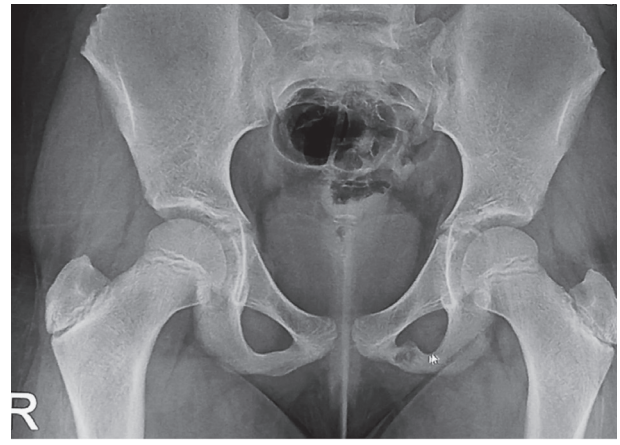

Figure 1. Hips radiography showing an asymmetric shadow at the left ischiopubic synchondrosis with no associated periosteal reaction or soft tissue thickening (white arrow).

Keywords: Child; Ischium/abnormalities; Osteochondrosis/diagnostic imaging; Pubic Bone/abnormalities

WHAT THIS REPORT ADDS

- The diagnosis of Van Neck-Odelberg disease is challenging and other entities, such as stress fracture, osteomyelitis, and post-traumatic osteolysis, should be excluded.
- Tumor-like appearance in a conventional radiographic exam may be mistaken for stress fractures, tumors, or inflammation.
- Clinical symptoms must be present together with the imaging findings in order to diagnose Van Neck-Odelberg disease.

Conflicts of Interest

The authors declare that there were no conflicts of interest in conducting this work.

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Confidentiality of data
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