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# Osteochondrosis of Ischiopubic Synchondrosis: Van Neck–Odelberg Disease

A 14-year-old boy was evaluated in the pediatric rheumatology clinic for recurrent gluteal and perineal pain persisting for 1 year. He described an uncomfortable pain that persisted throughout the day and sometimes resulted in restriction of physical activity. He reported no trauma or disease. Physical examination revealed normal height and weight for his age and sex, and puberty consistent with Tanner stage IV. He complained of a stinging pain when pressure was applied to the right groin and to the right side of the perineum. The remainder of the musculoskeletal and systemic examinations were normal.

Laboratory tests revealed normal complete blood count, blood peripheral smear, C-reactive protein, erythrocyte sedimentation rate, anti-streptolysin O test, calcium, phosphorus, alkaline phosphatase, 25-hydroxy vitamin D and parathyroid hormone, and urinalysis. Anti-nuclear antibody, HLA-B27, anti-citrullinated peptide antibodies, and rheumatoid factor were negative.

Abdominal ultrasound examination was normal. An expansion of the right ischiopubic synchondrosis was noted on an anteroposterior radiograph of the pelvis (**Figure**, A). His epiphyses were open. Pelvic magnetic resonance imaging (MRI) revealed a transverse hypointense fibrous band surrounded with edema in the region of the right ischiopubic synchondrosis seen at low signal intensity on T1-weighted MRI (**Figure**, B).

Based on the clinical and laboratory data, the patient was diagnosed with asymmetric hyperostosis and enlargement of ischiopubic synchondrosis (IPS), known as van Neck–Odelberg disease. Clinical symptoms disappeared after a 3-week course of nonsteroidal anti-inflammatory treatment (ibuprofen 30 mg/kg/day) and bed rest. After 3 years, control MRI of the same area showed normal findings.

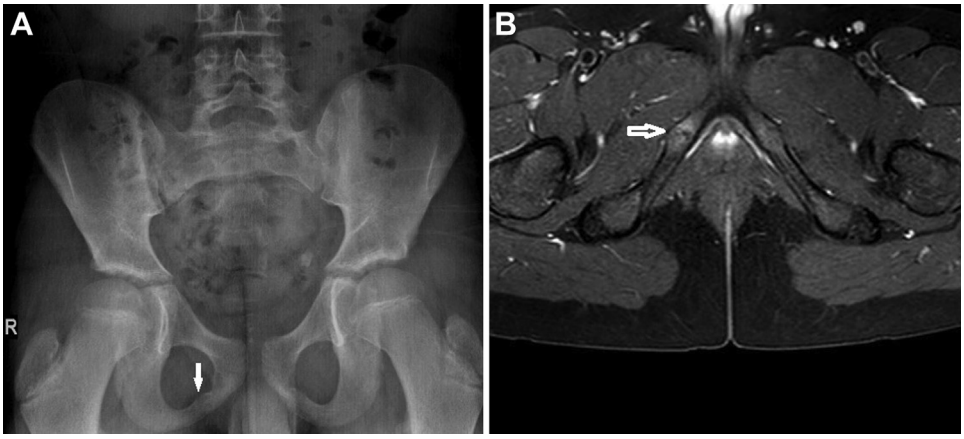


**Figure.** **A**, *Arrow* shows an expansion of the right IPS on an anteroposterior plain film of the pelvis. **B**, *Arrow* shows transverse hypointense fibrous band surrounded by edema in the region of the right IPS, with low signal intensity on axial proton density–weighted spectral attenuated inversion recovery MRI.

IPS is a tissue line formed from hyaline cartilage between the inferior ischial and pubic rami ossification centers. The ischiopubic area begins to form at the fifth and sixth months of fetal life, and cartilage fusion is complete at the end of a 9-month pregnancy. Ossification of cartilage tissue is completed in the pubertal period. Before ossification, asymmetric expansion of IPS may develop owing to asymmetric mechanical stress on the pelvis. Consequently, an inflammatory reaction causes a delay in widening and ossification.[1] Some children may develop limping and groin and gluteal

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pain during this period.[2] This was described by van Neck and Odelberg as swelling and demineralization of the ischiopubic region that they termed "osteochondritis ischiopubica." This is a benign condition that can develop in children aged 4-16 years until closure of ossification centers occurs.[3] Treatment typically involves 2-3 weeks of anti-inflammatory therapy, bed rest, and avoidance of exercise. Once ossification is completed, no deformity is observed in the IPS.

The differential diagnosis includes stress fractures, osteomyelitis, neoplastic processes, and enthesitis-related arthritis. Stress fractures are seen in the pubic ramus, and an irregular fracture line can be detected on MRI.[4] Bone marrow and surrounding soft tissue edema in the early period and abscess formation in the late period are typical findings in osteomyelitis. Ewing sarcoma is usually seen as a nonspecific lytic lesion associated with surrounding soft tissue swelling. Enthesitis-related juvenile idiopathic arthritis is diagnosed by the presence of enthesitis and arthritis, or by the presence of either arthritis or enthesitis along with any of the 2 following signs: sacroiliac pain and/or spinal inflammation, acute anterior uveitis, HLA-B27 antigen positivity, uveitis in family history, and spondyloarthropathy or sacroiliitis with inflammatory bowel disease in a first-degree relative. The clinical findings of pain in the pelvic region with the absence of fever and normal laboratory test results helps exclude the other possibilities. ■

**Nuran Sabir, MD**
Department of Radiology

**Pinar Çakmak, MD**
Department of Radiology

**Neslihan Yılmaz, MD**
Department of Pediatrics

**Selçuk Yüksel, MD**
Department of Pediatric Rheumatology and Pediatric Nephrology
Pamukkale University School of Medicine
Denizli, Turkey

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