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# PATELLOFEMORAL CHONDRAL DEFECT IN A PREADOLESCENT SKIER: A CASE REPORT IN EARLY SPORT SPECIALIZATION

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## ABSTRACT

**Background and Purpose:** Early sport specialization (ESS) refers to intense training year round in a specific sport starting at a young age with no or limited participation in other sports. This approach to training is highly controversial; recent literature suggests that this type of specialized training could be a contributing source to overuse injuries in youth athletes. The purpose of this case report was to describe a patellofemoral articular cartilage defect of the knee in a preadolescent skier due to overuse and repetitive microtrauma as a result of ESS.

**Study Design:** Case Report

**Case Description:** A healthy 11-year-old male competitive alpine skier presented with recurrent swelling of his right knee and persistent anterior knee pain while skiing without evidence of any specific history of injury or traumatic event. The patient failed a conservative treatment regimen including rest and formal physical therapy focused on generalized knee strengthening. Magnetic resonance imaging was ordered and revealed an articular cartilage defect of the medial patellar facet. The patient was treated with an arthroscopic debridement of his articular cartilage defect.

**Outcome:** At 12 weeks postoperatively, the patient presented with a normalized gait pattern, no evidence of knee effusion, full knee range of motion and patellar mobility symmetric to his contralateral limb, and no patellar crepitation or painful palpation on physical exam. The patient was released to begin return to sport progression at 12 weeks, and was cleared for full activities/returned to competitive skiing at 15 weeks postoperatively. At 16 weeks postoperatively, he won an international alpine ski race in Europe for his age group.

**Discussion:** Cartilage injuries and osteochondral defects are very common in adolescent athletes and often go undiagnosed. Allied healthcare professionals must be educated on the known causes of recurrent knee effusions and how early sport specialization may result in overuse injuries to knee joint cartilage.

**Level of Evidence:** 4

**Key Words:** Anterior knee pain, early sport specialization, overtraining, overuse injuries

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