

Pediatric Knee Problems: An Overview

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Received: February 27, 2018; **Published:** March 01, 2018

Knee related problems are a common in pediatric age group. Knee related problems in the paediatric population arises from different underlying pathologies than adults. In adults, the majority of the problems attributes to the degenerative changes and its associated complications, whereas in the paediatric age group, the underlying pathology may be congenital or growth related pathology. It is also useful to note that children have various anatomical and biomechanical changes to their lower limbs as they mature [1].

More than 25 million children participate in scholastic sports, and another 20 million are active in community-based sports activities. Each year, an estimated 2.5 million sports-related injuries occur in adolescents. Knee injuries account for up to 60 percent of all sports-related surgeries on high school athletes. Sports and recreational activities are the primary causes of knee injuries in individuals under the age of 25 [2]. Most of these data is available only from developed countries as there is effective systems are in place for registration, but there is paucity of data on knee injuries in pediatric population. in most of the developing and under developed countries as there is non-availability of any registration systems.

In this editorial common knee problems in children and adolescent are briefly discussed. These knee problems consist of following entities. First important problem is Overuse syndrome of knee. In recent years there is significant increase in overuse injuries in children. In most cases, these injuries are associated with sports-related activity. Overuse injuries occur gradually over time, when an athletic activity is repeated so often, areas of the body do not have enough time to heal between playing. The incidence of meniscus tears in children is on the rise mainly due to sports related activities. Because of their significant importance for a healthy knee, meniscus preservation or repair is essential, especially in a knee of a child.

Osteochondritis Dissecans (OCD) of the knee is an acquired, reversible, idiopathic condition of the subchondral bone. Boys have a higher incidence than girls. Reported incidence is on the rise.

Osgood-Schlatter disease (OSD) is a condition in which the patellar tendon insertion on the tibial tuberosity becomes inflamed. It is a well-known condition in late childhood characterized by pain and a bony prominence over the tibial tuberosity. Usually, it resolves at the end stages of skeletal growth. Boys are affected more often than girls, and the age of affection is typically in the second decade of life that is 10 to 15 years in boys and eight to twelve years in girls [3].

ACL injuries are thought be increasing in several patient population, including pediatric and adolescents. Increasing numbers of athletes, year round sports participation, and more focus on a single sport are all theories as to why this may be occurring.

Fractures about the knee are a common occurrence in children, and characteristics of the growing skeleton make children susceptible to specific fractures that do not occur in adults. Pediatric knee fractures are diagnosed by a comprehensive history and physical examination supplemented with appropriate imaging modalities. Depending on the injury, treatment may include immobilization, arthroscopic treatment, or open reduction and internal fixation [4]. Among the fractures in children and adolescent population related to knee, most common are tibial eminence fractures and patel sleeve fractures.

Acute hematogenous bone and joint infections are rare but potentially devastating diseases that are more prevalent in children. Depending on the localization, they manifest as osteomyelitis (OM), septic arthritis (SA) or their combination. The disease is considered acute if time from the onset of symptoms is less than 2 weeks. Boys are more prone than girls, which is explained by physical activity leading to repeating minitraumata. Staphylococcus aureus is the most common cause of septic arthritis in children. An acute onset of illness with an inflamed painful joint and restricted movements and inability to use joint (pseudoparalysis) clinically indicates septic arthritis [5].

Knee injury patterns in the pediatric patient differ from adult injuries because of their skeletal immaturity. This affects patient management due to the types of injuries they are likely to have, as well as the diagnosis and treatment techniques. In children and adolescents, open growth plates predispose them to unique injuries. Surgical treatment of growth plate fractures, for instance, requires special techniques.

To conclude with it is very important to understand that children are not miniature adults and their problems should be addressed differently than adults.

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Volume 9 Issue 4 April 2018

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