Scholars Journal of Medical Case Reports
Abbreviated Key Title: Sch J Med Case Rep
ISSN 2347-9507 (Print) | ISSN 2347-6559 (Online)
Journal homepage: https://saspublishers.com/journal/sjmcr/home

OPEN ACCESS

A Rare Occurrence of Sinding – Larsen Johansson Syndrome with Osgood – Schlatter Disorder in a Nigerian Child: A Case Report

Asuquo JE[1*], Abang IE[2], Anisi CO[3], Osakwe GO[4]

[1-3]Dept. of orthopedic surgery and Traumatology University of Calabar PMB 1115, Nigeria
[4]Dept. of Orthopedic Surgery and Traumatology University of Calabar Teaching Hospital, Calabar PMB 1278, Nigeria

*Corresponding author
Asuquo JE

Article History
Received: 24.12.2018
Accepted: 05.01.2019
Published: 16.01.2019

DOI:10.36347/sjmcr.2019.v07i01.002

Abstract: Sinding – Larsen Johansson syndrome (SLJ) and Osgood Schlatter disorder (OSD) are Osteochondroses. Both conditions may coexist, resulting in anterior knee pain in a child. We report a case of its coexistence in a Nigerian child. We reviewed patient medical journal corroborated with clinical examinations and review of relevant literatures. The case was that of an eleven years old active male athlete with anterior knee pain and functional limitation of flexion. Radio-diagnostic imaging confirms the existence of both types of Osteochondroses. We report the coexistence of both conditions in a Nigerian child.

Keyword: Sinding-Larsen Johansson Syndrome, Osgood Schlatter disorder, anterior knee pain, Osteochondroses, osteochondritis.

INTRODUCTION

The Sinding – Larsen Johansson syndrome (SLJ) and Osgood Schlatter disorder (OSD) are osteochondroses of the distal (inferior) pole of the patella and the tibial tuberosity respectively. They are sometimes referred to as "non articular" Osteochondroses which can occur simultaneously [1-3]. Their pathogenesis are similar, they result from repetitive micro trauma or chronic traction following contraction of the quadriceps tendon resulting in fragmentation of the cartilaginous part of the distal pole of the patella and the tibial tuberosity which in both cases remains largely cartilaginous or immature at the time. This process has been described as traction apophysitis. Some author opined that there is some form of osteonecrosis occurring at the distal pole of the patella while others have contrary views. SLJ has been described as affecting the tendon (tendinitis), infrapatella bursa (bursitis) and the distal (inferior) pole of the patella [3, 4].

They are often seen in adolescents' between 10 – 14 years (can persist till adulthood) or lower as in the case of OSD. Both are commoner in boys involved in competitive sports like football, gymnastics and sprinting etc. Clinically, it presents as anterior knee pain, swelling, functional limitation of knee flexion which accentuates pain. Diagnosis can be made clinically but corroborated by ultrasonography (USS) and radiographs of the knee which delineates the pathology. Efforts should be made to exclude other causes of knee pain especially referred pain from the hip. Arthroscopy can be used for both diagnosis and treatment. However, effort should be made to screen for other causes of knee pain in these age group which includes; bipartite patella, juvenile osteochondritis dessicans, plica syndrome, tendinitis around the knee and hemophilic arthropathy etc [5- 7] Treatment is largely conservative involving periods of rest, protective cast and drugs. Surgery is reserved for recalcitrant cases [1, 3, 4].

I have searched the literature and to the best of my knowledge, the coexistence of both conditions in a Nigerian child has never been reported.

CASE REPORT

We present a case of an 11 year-old boy that plays football actively. He presented with a 3 week history of spontaneous anterior knee pain exacerbated by movements, exertion and loading (kneeling on it). There was associated swelling of the inferior pole of the

patella and the tibial tubercle. The left tibial tuberosity was swollen but asymptomatic.

Examination findings were tenderness at the inferior pole of the patella to the tibial tubercle (origin and insertion of the patella tendon), anthalgic gait and functional limitation of knee range of motion (ROM 5° – 100°) due to pain. The hip joint was found to be normal.

Ultrasound scan reveals, thickening of the patella tendon at the proximal insertion and heterogeneity of the tendon at its distal insertion. There was fragmentation of the lower pole of the right patella. See fig. 1

Knee radiograph shows fragmentation of the inferior pole of the right patella and the presence of ossicle in the insertion of the patella tendon to the left tibial tuberosity while that of the right appears normal. See fig. 2

Patient was advised to suspend sporting activities for the mean time. He was offered short term NSAID, cast immobilization and elbow crutch-aided (non weight bearing) ambulation.

Patient recovered remarkably over 6 weeks and still being followed up.

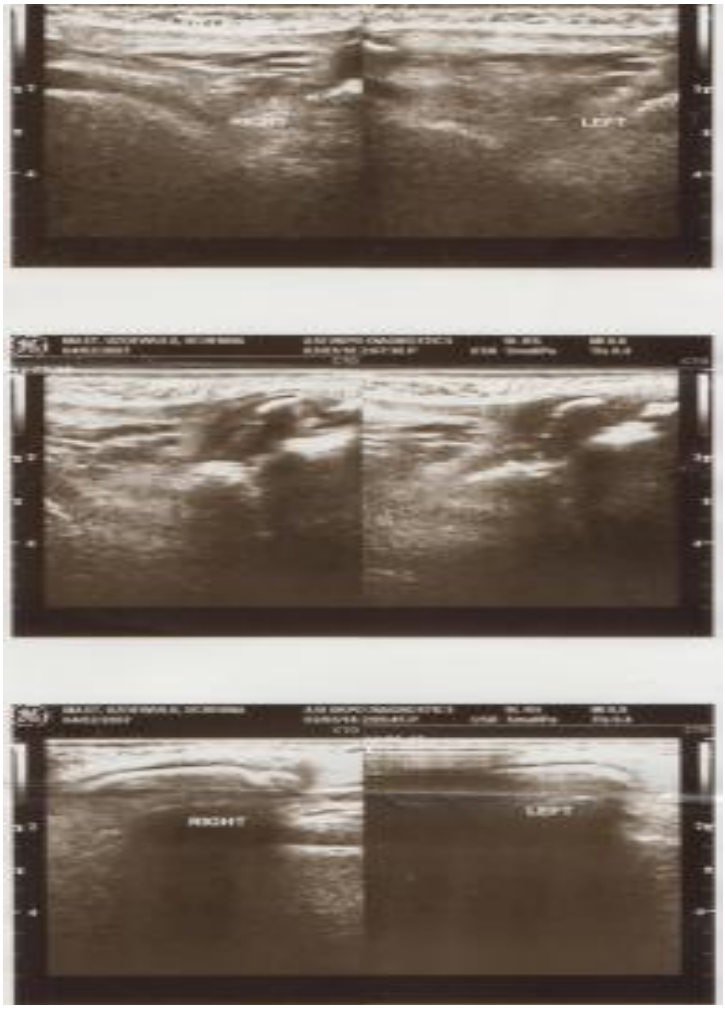

Fig-1: Ultrasound scans of the knee

Fig-2: X-rays of both knees and hip joints

DISCUSSION

The histological and imaging features of SLJ and OSD are similar. However, while the pathology in SLJ occurs at the origin of the patella tendon, that of OSD occurs at the insertion of the tendon. They result from chronic traction forces by the extensor mechanism leading to the term traction apophysitis. 'Technically the inferior pole of the patella is not an apophysis' [5]. The formation of a synchondrosis with ossification of adjoining tendon occurs as late sequelae. The index child is a male involved in competitive sporting activity and within the age range. These features are similar to those reported by other researchers [1-4, 7]. The clinical features seen in the index patient is in tandem with that reported by numerous literatures [2- 4]. The USS and X-ray findings further buttress the fact that these imaging modalities are essential (especially US) in confirming the diagnosis. These have been opined by some researchers who even suggested the use of magnetic resonant imaging (MRI) to further characterize the pathology when diagnosis is vague [4, 7]. It is worthy of note that the presence of ossicles in the tendon is not enough to make a diagnosis, this should be corroborated with the clinical findings [5].

The index patient posed a diagnostic dilemma using only radiograph which we initially considered a painful bipartite patella but not for the USS findings which clearly delineated the fragmentation of the lower pole of the patella. Some researchers have alluded to the fact that it's similar to Saupe type 1 bipartite patella classification [1].

The index patient was treated by cast immobilization, elbow crutch-aided (non weight bearing) ambulation, as well as short term NSAID medication. Abstention from sports was advised for the mean time. He recovered remarkably after 6 weeks. This confirms the known fact that the condition is self-limiting as reported by other authors [3-5, 7].

CONNCLUSION

We use this case to illustrate the fact these conditions can occur together in a Nigerian child, the right imaging modalities are essential to confirm the diagnosis.

REFERENCES

1. Kajetaneka C, Thaunata M, Guimaraesa T, Carnesecchib O, Daggettc M, Sonnery-Cotteta B. Arthroscopic treatment of painful Sinding-Larsen-Johansson syndrome in a professional handball player. Orthopaedics & Traumatology: Surgery & Research. 2016; 102: 677– 80
2. Hagner W, Sosnowski S, Kazin˜ski W, Frankowski S. A case of Sinding-Larsen-Johansson and Osgood-Schlatter disease in both knees. Chir Narzadow Ruchu Ortop Pol. 1993; 58(1):13 – 15.
3. Valentino M, Quiligotti C, Ruggirello M. Sinding-Larsen-Johansson syndrome: A case report. Journal of Ultrasound. 2012; 15: 127 – 29
4. Kuehnast M, Mahomed N, Mistry B. Sinding-Larsen-Johansson syndrome. S Afr J CH. 2012;6(3): 90-92
5. Davis KW. Imaging Paediatric Sport Injuries; Lower Extremities. Radiol Clin Am 2010; 48: 1213 – 35
6. Asuquo JE, Orimolade EA, Salawu L, Oladiran AB. Hemophilic arthropathy; a case report. The

Nigerian Postgraduate Medical Journal June. 2014: 21(2); 203 – 6

7. Patel DR, Villalobos A. Evaluation and management of knee pain in young athletes: overuse injuries of the knee. Transl Pediatr. 2017;6(3):190-198.