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Acromian Apophysitis: An important cause of shoulder pain in adolescent bowler

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Abstract
Shoulder pain in athletes is a disabling condition and have several causes. In the pediatric age group, developmental problems during growing skeleton may also give rise to pain associated with apophyseal inflammation. Apophysitis around shoulder region is uncommon. We, hereby, report a case of painful shoulder in an adolescent cricket player that was later diagnosed with acromion apophysitis on clinical and radiological basis and successfully managed by conservative method.

Keywords: Shoulder apophysis, Painful shoulder, Athlete, Sports, Cricket, Acromion, Paediatric

Introduction

Apophysis (plural apophyses) is normal bony growth regions at ends of certain bones that fuses with parent bone on skeletal maturity. Stress injuries and repetitive trauma to this region leads to apophysitis and is uncommon cause of pain in adolescent age. In children involved in overhead throwing sports, this entity may be an important differential for prolonged pain and requires judicious clinico-radiological assessment for the diagnosis.

Case Report

A 14-year-old adolescent boy was consulted us for his left side shoulder pain for the last six weeks. The pain was insidious in onset and increased in overhead throwing activities. He was a left hand dominant and an amateur cricket bowler. There was no history of direct or indirect trauma to the shoulder region presently and in the past. Initially pain was mild but increased in severity over last week limiting his sports practice. He took help of local physiotherapy unit and underwent heat and fomentation therapy including short wave diathermy for transient relief. On clinical examination, there was point tenderness over acromion tip area when compared with contralateral side. No increased local temperature and intact distal neuro-vascular status was noted. The radiograph of the shoulder showed increased distance between acromion apophysis and acromion body with irregular surfaces of apophysis (Fig.1, a). The diagnosis of acromial apophysitis was made and further higher investigations were refused by the attendants over financial issues. The conservative management with rest, fomentation and taping by the physiotherapy team was done and there was marked improvement noted after three weeks of therapy. The progressing radiographic union of acromial apophysis with acromial body was noted after a follow up of 18 months (Fig.1, b)

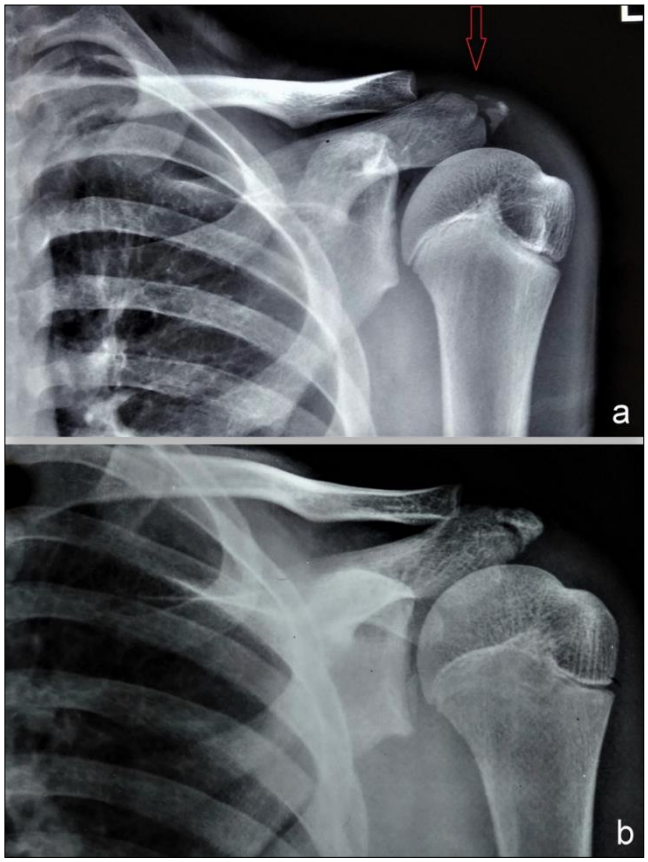

Fig 1: The radiograph of the shoulder showing increased distance between acromion apophysis and the scapula spine along with irregularity between surfaces(a) and the healing of the disorder and union with native bone in the follow up (b).

Discussion

Acromian apophysitis was described in three adolescent (12-14 years) athletes in a small series and managed conservatively [1]. Localized tenderness was key clinical feature with radiographic sclerosis and fragmentation of the secondary ossification centre of acromion. The bone scintigraphy was used in one of the cases showing increased uptake. Scintigraphy is beneficial in doubtful cases but is not readily available modality in resource poor settings. Isotope bone scan was used in another singular case report in an adolescent non-athlete girl [2]. Careful history and assessment of radiographs can also at times be diagnostic and may obviate the need of further investigations. Only radiographic evaluation coupled with clinical assessment was done in one report in a 13 year old adolescent boy [3]. The increased tension in muscles coupled with repetitive stress that is increased during growth spurts was supposed to be contributring factor [4]. The same factor also affects other apophyses like calcaneal, tibial tuberosity and olecranon. The reports of acromion apophysitis are sporadic and few in the literature [5].

The long term consequnces of acromial apophysis are unfused apophysis and is termed 'os acromiale'. In certain cases, it may be symptomatic. In a large series 12 sportsperson with impingement like pain were diagnosed with symptomatic os acromiale and most of them were managed by arhtroscopic excision as management [6].

Acromial apophysiolysis has also been reported as a distinct complication following unfused acromial apophysis in a large MRI based study in throwing athletes. Our case did not developed either of these complication and this short case snippet is described here for educative potential of this uncommon and often misdiagnosed case.

Conclusion

The knowledge of uncommon painful conditions like apophysitis should help in the acknowledgement and anticipation of these rare conditions and help in early diagnosis.

References

1. Morisawa K, Umemura A, Kitamura T, Ide J, Yamaga M, Takagi K. Apophysitis of the acromion. J Shoulder Elbow Surg. 1996; 5(2):153-6.
2. Moyes DA, Mawhinney D, Finch MB. Acromial apophysitis. Rheumatology. 2000; 39(10):1164-1165.
3. Quinlan E, Bogar WC. Acromial apophysitis in a 13-year-old adolescent boy: a common condition in an uncommon location. J Chiropract Med. 2012; 11(2):104-108.
4. Micheli LJ. The traction apophysitises. Clin Sports Med.1987; 6:389-404.
5. Spehler H. Acromial apophysitis: an aseptic necrosis of bone in a rare location. J Radiol Elkectrol Med Nucl. 1965; 46:751-2.
6. Pagnani MJ, Mathis CE, Solmon CG. Painful os acromiale (or unfused acromial apophysis) in athletes. J Shoulder Elbow Surg. 2006; 15(4):432-435.
7. Roedl JB,Morrison WB, Ciccotti MG, Zoga AC. Acrmial apophysiolysis: superior shoulder pain and acromial nonfusion in the young throwing athlete. Radiology. 2014; 274(1):201-9.