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ABSTRACT

***Objectives*: To identify aetiological causes of shoulder pain syndrome among patients attending a rheumatology clinic, and to highlight the therapeutic options.**
***Design:* Retrospective study.**
***Setting:* A private rheumatology clinic in Lagos, Nigeria from January 2002 to December 2006.**
***Subjects:* Forty female adult patients and 26 male adult patients aged 24-79 years.**
***Main outcome measures:* Patient reported outcome in terms of pain relief and increased mobility.**
***Results:* Sixty six subjects were seen during the study period. Females were more commonly affected and were mostly middle aged. Adhesive capsulitis was the most common condition while septic arthritis and avascular necrosis were least diagnosed 22.7% of the subjects could not, however, be categorised.**
***Conclusion*: Shoulder pain syndrome is common among Nigerians. Diagnosis and management are mostly based on the clinical presentations, especially considering the lack of sensitivity of plain radiographs and the high cost of more sensitive MRI. The treatment of these conditions are standard.**

INTRODUCTION

Shoulder pain syndrome is a common clinical condition, especially at the primary and secondary levels of medical care. It has been estimated that about half the population will have at least one episode of shoulder pain syndrome annually (1). Shoulder pain could be a source of suffering among those affected and may persist for months or even years. Such pains may also be associated with sleep disorders which in turn, further perpetuates the suffering of the affected.

The initial pathogenesis of shoulder pain syndrome often has multiple aetiologies, as well as multiple and distinct secondary aetiologies. These are all contributory to the final presentation (2). Though pain is the major presentation, limitation of movement could also be particularly disturbing. Unfortunately, there are no universal criteria for the differential diagnosis of the various chronic pain syndromes, or even a consensus on the treatment.

Common causes of chronic shoulder pain include bursitis, tendinitis, rotator cuff tear, adhesive capsulitis, impingement syndrome, avascular necrosis, and glenohumeral osteoarthritis. It has been estimated that the frequency of various pain syndromes seen in certain populations are of the order of rotator cuff syndrome (10%), adhesive capsulitis (6%) and glenohumeral osteoarthritis (2%) (3).

Shoulder impingement syndrome has been extensively described. This condition is attributed to the compression of the supraspinatus tendon beneath the coraco-acromial arch, which occurs mostly on forward flexion of the arm. Three stages of impingement syndrome have been recognised (4).

Stage 1 – relates to oedema and haemorrhage of the supraspinatus tendon
Stage II – characterised by bursa inflammation and fibrosis.
Stage III – this is characterised by tear of the rotator cuff.

Standard radiographs of the shoulder joints form the basis of imaging. Characteristic findings include subchondral sclerosis of major tuberosity, subacromial spurs, and anomalies of the acromion (4). Rare causes of shoulder pain syndrome include hemiplegic shoulder pain (5) and HIV Infection (6). Shoulder pain syndrome has been uncommonly reported among Nigerians.

The objective was to identify the aetiologies of shoulder pain syndrome among Nigerians as well as highlight the radiographic findings and treatment modalities.

MATERIALS AND METHODS

This was a retrospective study of adult patients presenting with complaints of shoulder pain lasting more than three months seen in a private practice rheumatology clinic in Lagos. These patients were seen over a period of five years January 2002 to December, 2006.

Patients complaining of either one or both shoulders were examined and radiographs were requested when affordable or available.

Tests for specific causes of shoulder pain syndrome were elicited (7). These include-

(i) Subacromial lesions – painful impingement tests on forced passive internal rotation, resisted external rotation and forced passive forward flexion.
(ii) Bicipitalis tendinitis – Speed's and Yergason's tests.
(iii) Rotator cuff syndrome – painful arc of abduction occurring between 70 degrees and 120 degrees and a brief painful episode at mid range of movement when lowering the arm from full abduction.
(iv) Adhesive capsulitis – painful restriction of glenohumeral movement in all planes of motion, both active and passive.

Blood tests including full blood count, random blood sugar, erythrocyte sedimentation rate were carried out. Radiographs were also carried out where possible and affordable.

Patients were treated with various combinations of any of simple analgesics, non-steroidal anti-inflammatory drugs, intra-articular steroids and physical therapies.

RESULTS

A total of sixty six subjects were identified with shoulder pain. The demographic characteristics are as shown in Table 1.

Table 1
Demography of shoulder pain syndrome subjects

Sex	F - 40 (61%)
	M - 26 (39%)
Age	Range 24 - 79
	Mean - 56.8
Duration of shoulder pain	Range : 3 months – 5 years
	Mean - 18 months

The right shoulder was the more commonly single joint involved in 49.2%, while the left shoulder was involved in 43.1%. Both shoulders were affected in the remaining 7.7%.

The frequency of the various conditions are as shown in Table 2 with most of the cases having diagnosis of adhesive capsulitis.

Table 2
Specific diagnosis among shoulder pain syndromes

Diagnosis	No.	(%)
Adhesive capsulitis	24	36.4
Rotator cuff syndrome	11	16.7
Subacromial bursitis	7	10.6
Calcific tendonitis	3	4.6
Bicipitalis tendonitis	2	3.0
Osteoarthritis	2	3.0
Septic arthritis	1	1.5
Avascular necrosis head of humerus	1	1.5
Undiagnosed	15	22.7

Radiographs were possible in 21 subjects of which only seven showed changes (Table 3)

Table 3
Radiographic findings among seven shoulder pain syndrome patients

Radiographic finding	No.
Calcific supraspinatus	2
Calcific bicipitalis tendinitis	2
Osteophytes	1
Periarticular sclerosis	1
Avascular necrosis	1

Treatment is as shown in Table 4. Most of the subjects had-intra articular steroids which was supplemented in most cases with either simple analgesics or NSAIDS. This gave instant relief in most cases, which was usually sustained. Physical therapy was also initiated. Three subjects who did not get sufficient relief had manipulation done under light anaesthesia with intravenous Diazepam 10-20mg given slowly. Some of the patients (22.7%) could not be characterised because they do not fit in to any of the diagnosis. An MRI will have shown more details of the soft tissue around the joint.

Table 4
Treatment modalities in patients with shoulder pain syndrome

Treatment modality	No.	(%)
Intra articular steroids+NSAIDs	43	65.1
NSAIDs alone	13	19.7
NSAIDS+Physiotherapy	7	10.6
Manipulation under anaesthesia(IV Diazepam)	3	4.6
Total	66	100

DISCUSSION

Complaints of shoulder pain are second only to back pain among patients with musculoskeletal conditions in primary health care (7, 8). Elderly persons are particularly prone, with the resultant social dependence.

The frequencies of the various types of shoulder pain syndrome are as shown in Table 2. Adhesive capsulitis is the most common cause while osteoarthritis and avascular necrosis of head of humerus are less frequently diagnosed. Adhesive capsulitis is often related, among other causes, to diabetes, trauma, neurological lesions, chronic pulmonary and cardiac diseases as well as thyroid diseases. In our study, there was an association with diabetes mellitus in 20% of the 40 subjects in whom blood sugar was determined. All these were previously diagnosed diabetes mellitus.

Radiographs are usually non-contributory in the diagnosis of shoulder pain syndrome (9). Our results confirmed this low radiographic outcome with only seven out the 21 radiographs showing changes. It is generally recognised that most cases of shoulder pain syndrome result from lesions of the soft tissue around the joint. Osteoarthritis of the shoulder is not usually seen except in elderly patients. Magnetic resonance imaging is the indicated diagnostic investigation in such cases. This however is not readily available in Nigeria and where it is, is very expensive. Radiography itself is usually unaffordable by many of our patients. As such, the diagnosis must be based on the clinical presentation.

The general principles of treatment are applicable in all cases. These include simple analgesics, non-steroidal anti-inflammatory drugs intra-articular steroid injection, manipulation under anaesthesia as well as physical therapy. Most of our subjects did very well with intra-articular steroids usually supplemented by NSAIDs. In three cases, the response was unsatisfactory and manipulation under light anaesthesia with intravenous diazepam(10mg) had to be carried out. Some of the cases treated with NSAIDs alone had co proxamol (combination of paracetamol and dextropropoxyphene) in addition.

In conclusion, shoulder pain syndrome is common among middle aged persons. Early recognition, and treatment even without aid of radiographs is important.

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