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ORIGINAL ARTICLE

CALCIFIC TENDONITIS: MANAGEMENT BY ULTRASOUND THERAPY

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ABSTRACT: BACKGROUND: Ultrasound therapy for Rotator Calcification is a conservative method of treatment. **METHOD:** 74 patients with rotator cuff calcification was included in this study. **PERIOD OF STUDY:** 2008-2014 December. **RESULTS:** All the cases were clinically and radiologically improved, except two (2) cases who were clinically symptoms free but radiological calcification even after 20 days of ultrasound therapy was still visible. **CONCLUSION:** Ultrasound therapy is a definite alternative method of treatment.

KEYWORDS: Rotator cuff calcification, Ultrasound therapy.

INTRODUCTION: Painter described calcification in the shoulder in 1907. Codman established that the Calcification was within the tendons of rotator cuff.[1]Calcific tendonitis is a condition that causes the formation of a small usually about 1-2cm size calcium deposits (Hydroxyapatite) within the tendon of rotator cuff. It is one of the most painful conditions to affect arotator cuff tendon. The deposits are usually found in patients of 30-40 years, higher incidence in diabetes mellitus.[2]

Causes of calcific tendonitis are not entirely understood. Reduced blood supply & ageing of tendons are suggestive hypothesis.[2] May be due to local decrease in oxygen tension that leads to fibro cartilaginous metalesia & resultant calcification.[3]

Rotator cuff calcification is a common finding (2.5-7.5%) of healthy shoulder in adults.[3] More common in female (70%), most common in 5th decade of life.[4] Symptoms usually occur if the deposits are >1.5cm but present study does not found any correction between the size of the deposit & surer city of Symptoms.[5,6,7]

Uhthoff & Loehrproposed following Pathologic & Clinical Staging.[1]:

1. Formative phase.
2. Resting phase (May or may not be painful).
3. Resorptive phase (Very painful due to inflammatory reaction).

MATERIALS AND METHOD: 74 patients (male - 31; female - 43) with severe shoulder pain were studied retrospectively. For all the cases routine blood tests and plain x-ray of shoulder AP view were taken. All the cases were given injectable Diclofenac (IM) once daily for three (3) days, tab Tramadol - Paracetamol preparation at bed time and Trypsin - chymotrypsin preparation for five (5) days, rest in Arm Pouch sling and Ultrasound therapy for fifteen (15) days@10mins/day at an intensity 1.6 to 1.8 watt/cm^2.

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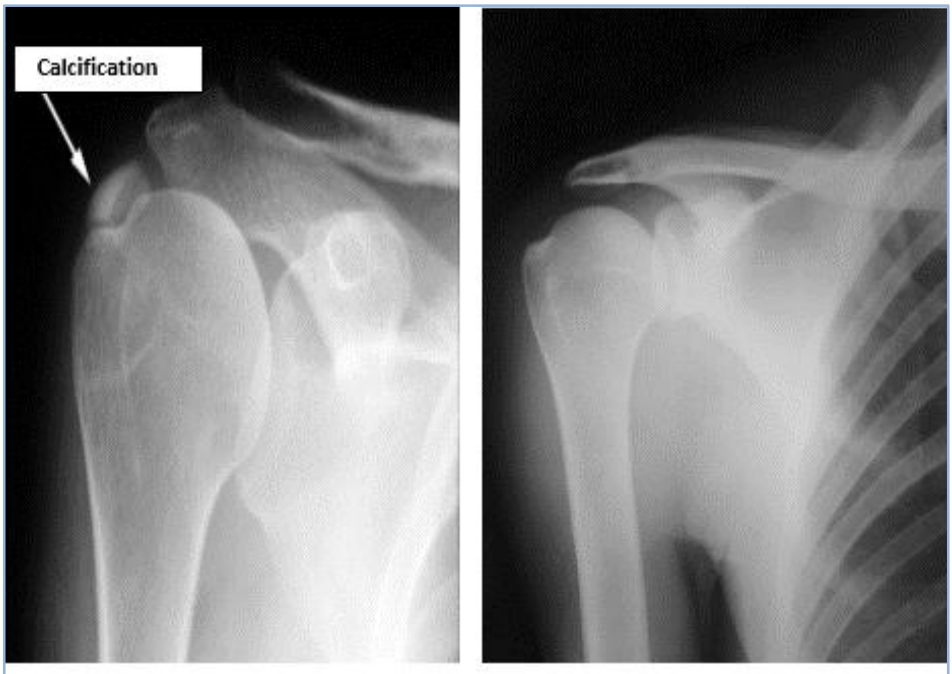
A brief analysis of 74 patients:

Sex Distribution:	i) Male	31 Nos.
	ii)Female	43 Nos.
Sidedness	i) Right Shoulder	34 Nos.
	ii) Left shoulder	40 Nos.
Diabetic:	25 Nos. (Male -17, Female-8)	

Age incidence:	Male	Female
0 to 10 yrs.:	0	0
11 to 20 yrs.:	0	0
21 to 30 yrs.:	2	3
31 to 40 yrs.:	8	14
41 to 50 yrs.:	7	12
51 to 60 yrs.:	14	9
61 to 70 yrs.:	0	5
71 to 80 yrs.:	0	0
81 to 90 yrs.:	0	0

RESULT: Pain started reducing after 4/5 days in all the cases. Some cases showed aggravation of pain on the 1st and 2nd day. 68 cases were completely symptom free after 15 days of Ultrasound Therapy and x- ray showed complete disappearance of calcific shadow. 2 patients were symptom free after 15 days of therapy but calcification shadow though reduced in size still persisted after 20 days of therapy. 4 patients did not turn up after 15 days of therapy for follow up. Clinical improvement was 100% but radiological improvement was 97.14%.



On the 1st day On the 16th day

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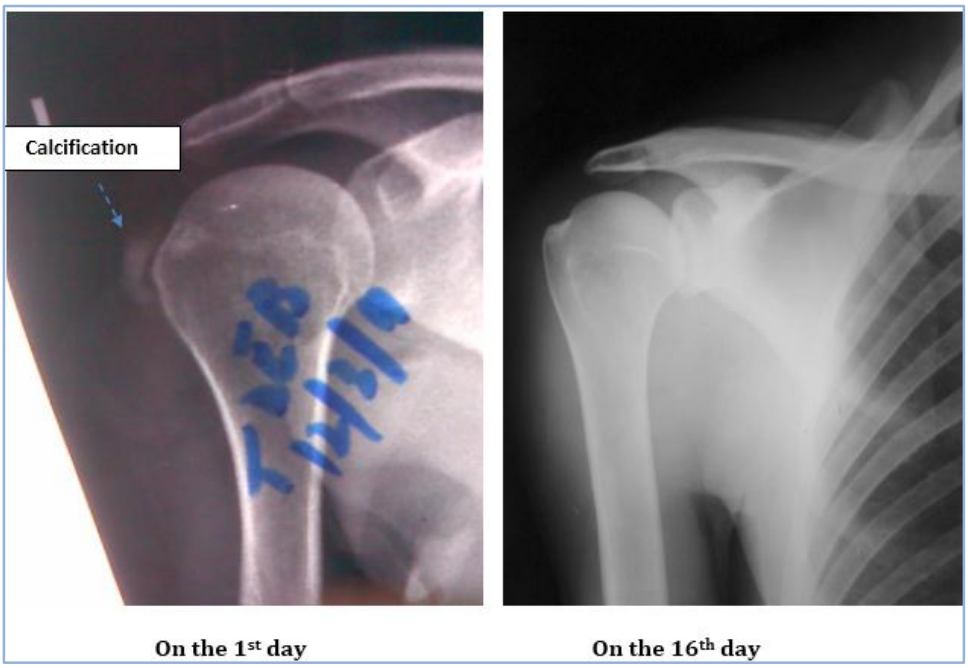

DISCUSSION: Though studies of treatment of rotator cuff calcification of shoulder including arthroscopic surgery with low extracorporeal shock wave therapy and low dose radiotherapy, American and European multicentric studies show excellent results from arthroscopic treatment. Ultrasound was Ineffective according to controlled studies outlined by Perron and Malouin.[4]

Wittenberg reported 18% and Rupp.[3] reported 16% recurrences following Arthroscopic treatment. The present study shows very good results and no recurrence with two years follow up.

CONCLUSION: Ultrasound therapy is an excellent way of treatment for rotator cuff calcification of shoulder without any surgical intervention and complication.

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