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Case report

A 57 Years Old Diabetic and Hypertensive Female Patient with Frozen Shoulder

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ABSTRACT

Frozen shoulder is a condition of adhesive shoulder or capsulitis occurs at the outset painful with later on continuing restricted for both active and passive shoulder joint range of motion, this inflammatory condition is root of fibrosis in shoulder joint capsule with pain, shoulder stiffness, restrictions in normal movements and shows absolute or nearly absolute recovery with assorted time length. This condition occurs in elderly population common in 4th to 7th decades, women are more prone to have this condition. A 57-year-old female with chief complaint of insidious onset pain often with aggravating pain and gradually decreased normal range of motion. The abundant level of evidence for Physical therapy in treatment of frozen shoulder is a specific manual treatment should be merged with advisable exercise or normal performance within the limits of pain that reached normal or simply painless self-shoulder active motion gives better results with intensive Physiotherapy. This case report concluded that the frozen shoulder or adhesive capsulitis is a secondary complication to Diabetes which leads to Hypertension in 57 years old female. Physiotherapist need to take care of hypertension while rehabilitating frozen shoulder patients.

Keywords: Adhesive capsulitis, Arthroscopic Release, Painful stiff shoulder, Diabetes, Hypertension.

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INTRODUCTION

Adhesive Capsulitis (AC) seriously affects patient's ability to carry on regular activities. Any sudden movement causes pain with passive restriction in the full movement of a shoulder joint. Usually incidences 3-5 % with higher risk in diabetic patients [1]. Occurs during 4th-6th decades. this condition is idiopathic, people with diabetes and hypertension are considered in additional 'substantial' group, accounts 1/3rd of adhesive capsulitis [2]. Progressive contracture of capsule, disabling and sever pain which patient finds difficult to cop up so, primary care is to reduce pain. The condition affects one side frequently so bilateral presentation is rare [3]. Some associations are Parkinson's disease, stroke, pulmonary and cardiac diseases the pathologies vary from idiopathic adhesive capsulitis [4].

Clinical Presentation

This case report is of 57-year-old female (housewife) arrived at physiotherapy department with chief complain of pain and stiff shoulder in left upper limb with history of diabetes and hypertension. The patient had difficulties in daily routine work, grooming, dressing other overhead activities, pain with insidious onset and decrease in range of motion (ROM) of left shoulder. One year ago, the patient started suffering from pain, feeling weakness and easy fatigue, pain was pricking more during night time, aggravated by doing several activities and reduces when patient was resting or taking analgesics.

The pain measured on Numeric Pain Rating Scale was 8/10 with focused examination of left shoulder by performing manual muscle testing of flexors, abductors and rotators of shoulder which were in grade IV within pain-free range. Investigation of X-ray showed increased joint space between acromion process and humerus bone. Differential diagnosis showed only bicipital tendinitis – as deltoid muscle girth was reduced than normal or right upper limb of patient. Clinical diagnosis of stage II also called adhesion stage of AC. (Figure 1 & 2) The external rotation for patient was hard and mostly restricted movement than other movements.

Therapeutic Interventions

Physiotherapy management started by cryotherapy to reduce pain and promote faster healing. Followed by Ultrasound 1 MHz frequency, the Interferential therapy (IFT) and TENS for pain and active range of motion exercises within pain free range.

Figure 1. Flexion

Figure 2. Scaption

Then we proceed to manual mobilizations mainly caudal glide and posterior glide to improve movement like flexion, abduction and external rotation of shoulder joint. Distraction with grade I and II glides for pain relief and grade III and IV glides to improve ROM. Once the ROM improves, muscle strengthening begins with resisted exercises starts from ½ kg and progresses gradually as per patient's tolerance. Other home program (Role of patient) includes getting arm up the back, getting the arm across the body, Codman's exercise and wall climbing to achieve pain-free movements and balance their emotional state.

Blood pressure is peak of systolic pressure so after some exercises developing resting hypertension. So, the precautions will be taken while performing exercises by periodic B.P. monitoring [5].

Follow up outcomes

Since adhesive capsulitis is weakening long-term process, self-limiting continuously developing condition especially is secondary etiology for example diabetes, hypertension, and thyroid diseases, non-shoulder surgeries that is CVT or neurosurgeries. The condition completely or nearly complete curable, no mortality rate is estimated with this condition, death is considered with some other underlying disease or ageing if idiopathic etiology.

The goal of Physiotherapist starts with patient's education and proper instruction for exercises to prevent more loss of range of motion, promote faster recovery to normal [6]. The basic and effective recovery in reducing pain, strengthen to normal range of motion, improving function and overcomes disability [7].Combination of pain management and supervised home program are considered as most important non-surgical treatments.

DISCUSSION

Females are mostly affected and 20% - 30% develops this condition in opposite shoulder [8]. It has been seen patients under physiotherapy showed better results with exercise therapy performed within the pain (64% of patient extend near to normal1, painless shoulder normal movements at one-year and 89% of patient at two years). Depends on age common in elderly, the symptoms last for more than 3 months. Pain is gradually increasing, disappear within 6-months, stiffness gradually appears as pain subside persist for 6-12 months then starts thawing and restricted active movement. The pathophysiology of adhesive capsulitis is uncertain, recurrently accepted theory is fibrosis starting point in thickening that leads to tightness over shoulder joint capsule. Adhesion of joint capsule to itself and humeral head causes further obliteration of axillary fold, reduced synovial fluid and restricted joint movement [9].

Stages of Frozen shoulder includes: 1) Painful/Acute/Freezing Stage: from two to nine months. The shoulder joint movement 30` inferior angle 5` clavicle upward elevation [10]. 2) Adhesive/Stiffening/Frozen Stage: moderate pain with restricted motions only apparent at extremes of movements may occur four months to one year. 3) Resolution/Thawing Stage: Voluntary, progressive upgrade in functional and normal range of motion which can last from five months to two years.

Patient education encourages compliance, informing patients about stages, duration or course of condition usually reduces frustration. It's all-important to emphasis that while the range of motion would improve, it may never be absolute. Patients appear with good quality upgrade in active range of motions and reduced pain after short wave diathermy treatment after eight weeks use. With acupuncture effective and safer method to overcome pain.

3D scapular kinematics are specific to shoulder pathological conditions considered for appropriate therapeutic management. Mostly the patient is present with thawing phase in adhesive capsulitis so; we treat stiffness and pain over that area but effective home exercise therapy by applying moist heat for better condition which is an anti-inflammatory medication. Ultrasound is very effective investigation in musculoskeletal condition for elderly age group in diagnosis of shoulder pathologies condition for example frozen shoulder and biceps tendon lesion. Diagnostic test passive external rotation which restrict in contracture shoulder and diagnosis of x-ray that exclude other causes of restricted and palpation.

Some women after mastectomy show intense pain a common musculoskeletal condition further develops fibrosis of shoulder joint with anterior chest pain at the site of mastectomy with decreasing ROM which can overcome by physiotherapy to minimize the complication. Operative interventions include: 1) Arthroscopic capsular release in which general anesthesia is given that documents pre-operative range of motions clinical studies investigating arthroscopic capsular release to treat primary idiopathic. 2) Manipulation under anesthesia in which shoulder joint capsule is stretched gently by initiating flexion movement of humerus then abduction and finally humerus is adducted and we try to move it into external rotation.

CONCLUSION

This case report concluded that the adhesive capsulitis is a secondary complication to Diabetes which leads to Hypertension in 57 years old female. Physiotherapist need to take care of hypertension while rehabilitating frozen shoulder patients.

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Declaration of patient consent

The author certifies that significant consent forms were obtained from the patient. In the consent form patient has given all his consent for her clinical information to be published in the journal. The patient understands their personal information and identity will not be disclosed.

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Conflicts of Interest

No conflicts of interest.

REFERENCES

1. Whelton C, Peach C A, 2018. "Review of Diabetic Frozen Shoulder". European Journal of Orthopaedic Surgery & Traumatology: Orthopedie Traumatologie. 28(3), 363–371.
2. Jones S, Hanchard N, Hamilton S, 2013. "A Qualitative Study of Patients' Perceptions and Priorities When Living with Primary Frozen Shoulder". BMJ Open. 3(9), e003452.
3. Nagy M T, Macfarlane R J, Khan Y, 2013. "The Frozen Shoulder: Myths and Realities". The Open Orthopaedics Journal, 7, 352–355.
4. Dias R, Cutts S, Massoud S, 2005. "Frozen Shoulder". BMJ. 331(7530), 1453–1456.
5. Sk D, N J, Ak W, 2005. "Blood Pressure Response to Treadmill Testing among Medical Graduates The Right Time to Intervene". Indian Heart Journal, 57(3), 237-40.
6. Jason J I, Sundaram S G, 2015. "Physiotherapy Interventions for Adhesive Capsulitis of Shoulder: A Systematic Review". International Journal of Physiotherapy and Research. 3(6), 1318–1325.
7. Uppal H S, Evans J P, Smith C, 2015. "Frozen Shoulder: A Systematic Review of Therapeutic Options". World Journal of Orthopedics. 6(2), 263.
8. Wadhokar O, Patil D, Phansopkar P, 2021. "Efficacy of Sub Occipital Myofacial Release Technique on Functional Disability in Temporomandibular Dysfunction with Neck Pain: A Randomized Control Trial". Protocol Exchange. 1486, v1.
9. Jain R, Pawar A, Phansopkar P, Wadhokar OC, Chitale N, 2021. "A complex case of prosthetic joint infection post total knee replacement: A case report". Medical Science, 25(111), 1028-1032.
10. Kulkarni C A, Naqvi W M, 2021. "Impact of Virtual Reality on Rehabilitation of Distal Radial Fracture with Head Mounted Device". Protocol Exchange. 1341, v1.

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