Study of Conservative Management of Frozen Shoulder

Original Article:
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Abstract: Frozen shoulder is a condition characterized by pain and global restriction of movement with loss of external rotation. All 77 patients with idiopathic frozen shoulder syndrome diagnosed between January 1995 and January 1998 were included. Study shows that Manipulation followed by physiotherapy should be started earlier rather than late. Some authors believed that after a period of six months most improved pain wise but still have residual restriction of movements after taking treatment in the form of physiotherapy or manipulation under general anesthesia, but they become adapted to do full function of his/her day to day routine work.

Key Words: Frozen shoulder, Conservative, Physiotherapy.

INTRODUCTION: Frozen shoulder is a condition characterized by pain and global restriction of movement with loss of external rotation. A wide variety of treatments have been investigated, including local or oral steroids, manipulation under anesthesia (MUA), stellate ganglion block, physiotherapy, infiltration brisement, and radiotherapy. There is no general agreement in favor of one form of treatment, and the response to a particular treatment varies in different series.

The value of local steroid injections may be taken as an example. In a retrospective study Hazleman could not show any difference between local steroid injection, MUA, and physiotherapy. Similarly, but in a prospective study, Lee et al. found no significant advantage of local steroid injection plus physiotherapy against heat plus physiotherapy. However, Roy and Oldham have reported local steroid injections to be highly effective in patients with painful, generally restricted shoulders. Quin also found steroid injections to be effective, but he noted that the improvement in pain and range of movement was short-lived.

Treatment regimens should be judged against natural recovery, which is often slow and incomplete. Simmonds studied 21 patients for more than three years. Nine had persistent weakness and pain, six had weakness or Accepted for publication 19 November 1983. Correspondence to Dr B. L. Hazleman. loss of movement, and only six regained normal function.

Whether any clinical features such as mode of onset can predict or influence the eventual outcome also remains unclear. Hazleman found early presentation but not severity or type of onset (spontaneous or traumatic) to influence the recovery time. Clarke et al reported a trend for young males and dominant arm involvement to be associated with a less favorable prognosis.

As both the studies were performed retrospectively, interpretation of these trends is difficult. Feamley and Vadasz noted that patients with a raised sedimentation rate responded better to steroid injections. However, they were unable to show that the duration of symptoms at presentation or the mode of onset affected the prognosis.

Since Codman stated in 1934 that “even the most severe cases recover with or without treatment in about two years,” subsequent authors have reinforced the perception that the course of frozen shoulder is benign and Despite these optimistic predictions, however, it has been our experience that, in some patients, a frozen shoulder remains symptomatic and has somewhat restricted
motion even many years after the onset of symptoms. We wondered if frozen shoulder is, indeed, a self-limited condition that resolves spontaneously with little residual restriction of motion. The purpose of this study was to evaluate prognosis of different conservative management of frozen shoulder.

MATERIAL AND METHOD: All 77 patients with idiopathic frozen shoulder syndrome diagnosed between January 1995 and January 1998 were included. The criteria for selection for this study consisted of (1) at least a one-month history of pain and stiffness of the shoulder for which no other cause could be identified and (2) documented restriction of passive glenohumeral and scapulothoracic motion of 100 degrees of abduction on less and less than 50 per cent of external rotation. Glenohumeral joint movement was measured with the scapula stabilized by the researcher, by use of an inclinometer (Cybex).

Patients with significant injury to the ipsilateral shoulder or arm; with surgical procedures on the shoulder, arm, cervical spine, thorax, or breast within the previous 2 years; or with intraarticular deformities, degenerative arthritis, or inflammatory arthritis were not included.

Detail clinical history including personal history, family history was taken and thoroughly examined for pain, local tenderness, stiffness, and restriction of movement like flexion, extension, abduction, internal rotation and external rotation, all the pt were investigated for routing blood investigation and x-ray.

All the patients were managed with shoulder exercises which was done either at home or in a supervised physical therapy setting and most commonly begin with shoulder mobilization exercises. It was further supplemented with various therapeutic modalities like subaromial injection of Ignoceain and cortisone and non steroidal anti inflammatory drug.

Ten patients were managed with manipulation under anesthesia. After a minimum of one month of conservative treatment had failed to result in improvement. No patients were managed with an open operation or the shoulder of arthroscopy.

All patients were followed up at the interval of 6,10 and 14 week, range of motion was measured and noted in four categories from no restriction (>90% movement) to severe restriction (<70% movement). All findings were noted down in pre designed perform.

RESULT AND DISCUSSION: Fifty patients treated conservatively for frozen shoulder at Shri M.P.Shah Medical college were studied, our of 50 there were 60% male as compared to 40% female. In our study common age group of development of frozen shoulder was between 50-60 years, which is correlated with study done by Benjamin. Involvement of non dominant shoulder was seen in 70% cases which are well correlated with study of hazleman et al. All cases were of unilateral involvement and there was no case suggestive of bilateral involvement.

Out of 50 patients 8% were having diabetes mellitus, 2% had history of MI and one had history of fracture surgical neck humerus before six month as associated condition.

Table I: comparison of different conservative treatment

<table>
<thead>
<tr>
<th>Type of treatment / restriction in (%)</th>
<th>Severe restriction</th>
<th>Moderate restriction</th>
<th>Mild restriction</th>
<th>No restriction</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physiotherapy</td>
<td>4(12)</td>
<td>13(40)</td>
<td>9(27)</td>
<td>7 (21)</td>
</tr>
<tr>
<td>Intra articular injection</td>
<td>2(29)</td>
<td>0(00)</td>
<td>4(58)</td>
<td>1(13)</td>
</tr>
<tr>
<td>Manipulation Under G/A</td>
<td>2(20)</td>
<td>2(20)</td>
<td>1(10)</td>
<td>5(50)</td>
</tr>
</tbody>
</table>

92% of patient in our study showed severe restriction of movement and rest 8% showed moderate movement. 66% patients were undergone treatment with physiotherapy while...
14% had added intra articular injection and 20% had to go for manipulation under anesthesia. Taking into consideration as 100% patients were having severe restriction at the time of first visit result of different three modality at the time of third follow up (14 week) can be compared as follow In Table I and Graph I.

Thus, above finding suggest that overall excellent result was achieved in 13 cases out of 50 patients of which maximum number were manipulated under G.A. followed by physiotherapy. Next best results were obtained by intra articular injection of hydrocortisone.

Graph I : comparison of different conservative treatment

CONCLUSION: Manipulation followed by physiotherapy should be started earlier rather than late. Some authors believed that after a period of six months most improved pain wise but still have residual restriction of movements after taking treatment in the form of physiotherapy or manipulation under general anesthesia, but they become adapted to do full function of his/ her day to day routine work. We personally found in our short follow up study, manipulation followed by physiotherapy offered better result, however better assessment of result require long term follow up study.

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