

Management of Frozen Shoulder by *Agnikarma* (Therapeutic Cauterization) and *Patrapinda sweda* (Herbal Hot Fomentation): A Case Study

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Abstract

Frozen shoulder also known as adhesive capsulitis is disabling disease of shoulder causing pain and restricted mobility of shoulder joint. Although the disease is self-limiting it takes a long time for complete recovery ranging from few months to 3-4 years. Basically, conservative treatment is done which involves use of NSAID and physiotherapy. Most of the patients get relief in due course of time with this as the disease is self-limiting but some may not respond at all to this conventional conservative therapy and needs surgical intervention involving manipulation under anaesthesia, arthroscopic capsular release and hydrothiolation. One of our patient who got no relief with conservative management and was suggested surgery by an orthopaedic surgeon was effectively treated with *Agnikarma*, *patrapinda sweda*, Tab. *Mahayograj guggulu* and decoction of *dashmool* and *rasna* (*Pluchea lanceolata*). This case illustrates the use of ayurvedic treatment measures in nonresponding cases of frozen shoulder.

Keywords: Frozen shoulder; *Agnikarma*; *Patrapinda sweda*; *Mahayograj guggulu*

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Introduction

Frozen shoulder also known as adhesive capsulitis is disabling disease of shoulder causing pain and restricted mobility of shoulder joint. Prevalence rate is 2-5% in general population [1]. It's a disease of unknown aetiology. However, prolong immobilization of shoulder due to surgery or trauma may cause this condition. Incidences are higher in diabetic patients. It is common in age group ranging in the age group 40 to 60, more commonly seen in females. Patients of rheumatoid arthritis, hypothyroidism or hyperthyroidism, patients of rotator cuff injury are at risk of developing frozen shoulder. It is characterised by severe pain in shoulder and restricted movement both active and passive. All types of range of movements are restricted particularly external rotation is more painful to start initially then all movements become painful and restricted. Pain is particularly worst at night and it disturbs the sleep of patient a lot [2]. Patient can't do his/her daily activity like wearing of clothes, house hold work etc. Although the disease is self-limiting it takes a long time for complete recovery ranging from few months to 3-4 years. Basically, conservative treatment is done which involves use

of NSAID, physiotherapy. Most of the patients get relief in due course of time with this as the disease is self-limiting but some may not respond as doing physiotherapy is painful job and effect of NSAID is also limited in initial phase. Such patients need to be treated with oral and intra-articular steroids injections. It also gives only temporary relief. Some patient doesn't respond at all to these conservative treatments and needs surgical intervention involving manipulation under anaesthesia, arthroscopic capsular release and hydrothiolation. One of our patient who got no relief with conservative management and was suggested surgery by an orthopaedic surgeon was effectively treated with *Agnikarma*, *patrapinda sweda* and tab. *Mahayograj guggulu*. This case illustrates the use of ayurvedic treatment measures in nonresponding cases of frozen shoulder.

Case report

A 55 yrs old female patient presented to our institute attached Ayurved hospital at RT Ayurveda college, Akola with c/o – severe pain in rt shoulder for 1 month, pain worst at night. Pain at upper arm anterior aspect for 15 days, gradual restrictions in movement, can't move arm upward and outward and backward for 1 month.

History of present illness

A 55 yrs old lady was apparently alright 1 month back suddenly she got dull aching pain at her rt. shoulder. She took some pain killers available OTC at medical store but didn't get relief. Pain was gradually increasing in intensity she also noticed restrictions in movements. So, she consulted her family physician who gave her tab. Emanzen d (diclofenac and serratiopeptidase), antacid, and diclofenac gel for topical application but pain was gradually increasing in intensity. It was worst at night she was not able to sleep properly. Hence, she was referred to an orthopaedician. He did her x-ray, shoulder, BSL(R), RA test. It was normal. He diagnosed the case as a frozen shoulder and gave NSAID, antacids and suggested extensive physiotherapy. Patient consulted physiotherapist went regularly to him for exercises for 7 days then she was doing it at home but she found it extremely difficult to do. She was not getting relief at all. So orthopaedician suggested her manipulation under GA and said if that doesn't work she will have to undergo surgery arthroscopic removal of scar tissue. As the patient was reluctant to undergo surgery she consulted at our hospital to seek ayurvedic management. P/H - k/c systolic hypertension controlled on regular medication. F/H - not significant. O/E - GC - fair, morbid obesity+No pallor, No ecerus, P- 64/min, BP - 140/90 CVS -S1 S2 - NAD, RS- NAD, L/E- Tenderness at anterior and posterior aspect of Rt. Shoulder, tenderness at anterior aspect of Rt. Upper arm. Abduction extremely painful, unable to raise hand above 45°, painful and restricted movement. On the basis of above observation and history we also diagnosed her as a case of frozen shoulder. We decided to go for agnikarma (an ayurvedic concept of therapeutic cauterization) and consent for the same was taken after explaining her whole procedure properly. Most painful, tender points were marked with marker pen, skin was cleaned with spirit, agnikarma shalaka (an instrument made up of 5 metals viz. Zinc, silver, copper, iron and tin in equal proportion) was made red hot by burning it on LPG gas burner. Agnikarma (cauterization) was performed in bindu manner (i.e., 12-15 dots were given at the marked area keeping 1 cm distance in between them). Angikarma was done by putting red hot shalaka at the marked site for just 1 second as soon as it sounded like 'chit' it was withdrawn from skin. After cauterization, it smells of typical burning of skin. As soon as procedure of cauterization was over assistant put fresh Aloe vera pulp over the burned site so that patient will not have burning sensation. Procedure was done after gaining confidence of patient. Initially she scared but during procedure she cooperated as it was not that painful as it looks. Immediately after agnikarma she got 80% relief at the tender spots. Mobility was also increased. She was able to wear her blouse which she was unable to do it previously before agnikarma. She was able to raise her hand up to 65°-70° before cauterization it was difficult for her to raise it above 45°C. We asked her to apply Aloe vera pulp or ghee (butter) and honey at burned site at home. We gave her Tab. *Mahayograj guggulu* 250 mg bd and decoction made up of *dashmool* and *rasna* 20 ml b.d. We asked her to do simple stretching exercises and shoulder rotation exercises. She was advised follow up after 7 days. In follow up she reported that pain was much less on the day of agnikarma, she slept well that night but next day morning intensity of pain again increased however

it was less than previous one. She admitted that she was able to do exercise properly with moderate discomfort for which previously before agnikarma she was experiencing severe pain and discomfort during exercise. In follow up increase in range of mobility was appreciated. This time we advised *patrapinda sweda* (a form of herbal fomentation) for 7 days. She was referred for the same at nidan-chikitsa department in our hospital where this procedure was carried out. For this patient was called regularly for 7 days in the morning. Fresh finely chopped leaves of *arka* (*Calotropis gigantean*), *datura* (*Datura metal*) and *eranda* (*Ricinus communis*) were cooked in *sahacharadi* oil. After cooking the leaves, it was properly placed in a thin, square shaped cotton cloth having fine pores and 4 edges of clothes were tied in such a way so that it can be hold in hand and the material inside will not spill out. This is called as pottali. It was kept in hot oil and when it was Luke warm the pottali was gently rubbed around the shoulder. When it became cold it was again kept in hot oil and the procedure was repeated for 15-20 mins. After that gentle massage was given at the shoulder with oil containing extract of all leaves. Then all stretching exercises were being done. Tab. *mahayograj guggulu* and Decoction of *dashmool* and *rasna* was kept continued. Day by day pain was reducing in intensity and range of mobility was increasing. Patient was asked to do exercise more frequently as per her comfort at home. Patient was again asked to visit after 7 days. Now in this follow up she got 70% relief. Patient was much satisfied as she was able to do her household work with mild discomfort and she was having sound sleep at night. In this follow up we again did *agnikarma* procedure at tender spots. This time also she immediately got complete relief in pain; there was mild pain during movement. She was kept on same medication and exercise was asked to continue. She was again asked to come for follow up after 7 days. In this 4th follow up there was mild discomfort during movement pain was almost completely reduced. Now in this follow up we stopped her oral medication and asked her to do exercise regularly. Thus, patient got almost complete relief in 4 weeks with ayurvedic management.

Discussion

Frozen shoulder is disabling disease of shoulder and is self-limiting, but recovery takes much longer time up to 3-4 yrs. It has 3 steps. First step is freezing step which lasts for 6 weeks to 6 months. In this phase intensity of pain is very much and movement is gradually restricted. Second stage is called frozen stage. It lasts for 4 months to 6 months. Intensity of pain decreases but range of motion is lost to a greater extent. Shoulder becomes notably stiff, both active and passive movements are very difficult. Third stage is thawing stage it lasts for about 6 months to 2-4 yrs. In this stage stiffness is gradually relived pain is very less as compared to previous 2 stages. This stage is usually well tolerated by patient as pain and stiffness both are gradually relieved [3]. Many treatment options are available for management of frozen shoulder still there is no consensus in literature regarding which therapeutic option is superior mostly because of lack of high level of evidence [4]. As the recovery period is much longer and initial stage of freezing is very painful some alternative treatment like ayurveda is very beneficial. *Agnikarma* (therapeutic cauterization) is

unique procedure described in ayurveda for instant relief from pain. It has been mentioned in the texts that diseases cured by *agnikarma* will never recur [5]. *Agnikarma* is indicated in all painful condition which are due to *vata* and *pitta*. Frozen shoulder can be correlated with *Avabahuk* as per ayurveda. *Agnikarma* is indicated in *avabahuk* (i.e., frozen shoulder). *Vata* and *kapha* both are involved in the pathology of frozen shoulder. *Agnikarma* immediately results in pacification of *vata* and *kapha*. This gives immediate improvement in symptoms of frozen shoulder. Like there is significant reduction in pain and stiffness is relieved resulting in increasing range of mobility. In present case patient got 70% relief in pain on first day immediately after *agnikarma* but from 2nd day pain increased, however pain was less than previous pain as it was before *agnikarma*. Instrument used for *agnikarma* was made up of five metals, it was heated till it became red hot when it was applied to most tender spot it must have reached to the dipper pathological part of shoulder joint (i.e., joint capsule) there by reliving inflammation and hence resulted in reduction of pain. As the pain was reduced patient herself felt confident, this resulted in improvement in range of movement. This is probable mode of action of *agnikarma* procedure in reliving the symptoms in terms of modern science. As in fomentation with infra-red light, the light waves penetrate to deeper level and this results in reducing inflammation. *Agnikarma* works on same principle. *Agnikarma* results in dilatation of local capillaries which results in improvement of blood supply to the part this results in sweeping away the inflammatory substances. However, if the disease is chronic, inflammation may not subside in single sitting. Next setting can't be done unless previous wounds of *agnikarma* heal properly. Aim of treatment in frozen shoulder is to reduce pain and to increase range of mobility. This can be achieved by reducing inflammation. *Agnikarma* is a type of strong fomentation this results in reduction in inflammation. *Patrapinda sweda* is also a unique procedure mentioned in ayurveda. Here the herbs used are leaves of *earand* (*Ricinus communis*), leaves of *dattura* metal and leaves of *ark* (*Callotropis giagentean*). These entire have anti-inflammatory property. When these leaves are finely chopped and cooked in *sahacharadi* oil it potentiates its anti-inflammatory action. *Sahacharadi* oil itself has an anti-inflammatory activity. These cooked herbal leaves are placed in cotton cloth having pores. A gentle rubbing is done at the affected part. This results in delivery of oil extracts of anti-inflammatory substances present in herbs. It gets absorbed from the skin and reaches the deeper part. When we used *patrapinda sweda* in this patient daily for 7 days for 15-20 mins, it resulted in gradually reliving of inflammation. Patient got sustained relief in pain. As the pain was reduced patient was able to do gentle stretching exercises. Gentle stretching exercises within the limit of pain achieves more mobility than aggressive stretching exercise. Tab. *Mahayograj Guggulu* is the best medicine described in ayurveda for inflammation. It is most commonly prescribed drug in various inflammatory conditions. It is mostly prescribed in arthritis. It is the herbomineral formulation containing all herbs that results in pacification of *vata*. Mainly ginger, *Piper cubeba*, *Plumbago zeylanica*, triphala purified resin of *Commifera mukul*, bhasma of iron, silver etc are present. All herbs in it have *ushna virya* (i.e., hot in action). *Vata* is having *sheeta virya* (having cold action). Hot property of *mahayograj guggulu* acts opposite to cold property

of *vata* and *kapha*. It can be used in various condition where *vata* and *kapha* is involved. In the present case both pain, stiffness was due to mainly *vata* and *kapha* was also involved. Vitiating of *vata* and *kapha* are the aetiological factors in frozen shoulder so Tab. *Mahayograj Guggulu* works better in this ailment. Decoction of *Dashmool* (a formulation containing 10 herbs having property of pacifying *vata*) and *rasna* (*Pluchea lanceolata*) is nothing but an aqueous extract. Both *dashmool* and *rasna* are having *ushna virya* (hot in property). It is used for treatment of vitiated *vata*. It has both an anti-inflammatory and an analgesic property. Decoction of these two definitely reduces inflammation and relieves pain. Thus, in present case we got excellent result by *agnikarma*, *patrapinda sweda*, Tab. *Mahayograj Guggulu* and decoction of *dashmool* and *rasna*. As *vata* and *kapha* are the causative factors, both *agnikarma* and *patrapinda sweda* resulted in pacification of *vata* and *kapha* thereby giving significant relief in symptoms. Tab. *Mahayograj Guggulu* also works by pacifying *vata* and *kapha*.

Conclusion

Frozen shoulder can be effectively treated with *agnikarma*, *patrapinda sweda*, Tab. *Mahayograj guggulu* and decoction of *dashmool* and *rasna* powder. This treatment regimen needs to be applied on larger number of patients to draw appropriate statistical conclusion.

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