

REVIEW OF PRASARANYADI KASHAY IN THE TREATMENT OF FROZEN SHOULDER

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ABSTRACT

Frozen shoulder or adhesive capsulitis is a disorder of the shoulder joint in which the connective tissue surrounding the gleno-humeral joint becomes inflamed and stiff, greatly restricting motion and causing pain. The shoulder differs from other joints at least one important aspect; its functional efficiency depends on inter related synchronous action at five sites. The shoulder joint is effective at five different places; 1) the glenohumeral joint, 2) the 'sub acromial' joint 3) the acromioclavicular joint 4) the sternoclavicular joint 5) the movement of the scapula across the thoracic cage. The smooth function of the shoulder, in particular, rhythmic elevation of the arm, require that all five parts of the mechanism work normally. But any stiffness at shoulder capsule may hamper the range of motion. The incidence of frozen shoulder is approximately 3 percent in the general population. Occurrence is rare in children and people under 40 but peaks between 40 and 70 years of age. The condition is much more common in women than in men (70% of patients are women aged 40–60). At this age vascular supply to rotator cuff is decreased or due to injury in rotator cuff tendon, restriction of shoulder movement occurs. Frozen shoulder is more common in diabetic patients and is more severe and more protracted than in the non-diabetic population. Prasaranyadi kashay is very useful formulation in such condition of Vata disorder where kapha is associated. The kashay is useful to release the stiffness of the shoulder. The ingredients of Prasaranyadi kashay like Prasarini, Rasona, Nagar reduces pain and inflammation.

Key words- Frozen shoulder, Prasaranyadi kashay

INTRODUCTION

Frozen shoulder (also known as **Adhesive capsulitis**) has been defined by the American Academy of Orthopedic Surgeons as-"A condition of varying severity characterized by the gradual development of global limitation of active and passive shoulder motion where radiographic findings other than osteopenia are absent." [1] It is a painful and dis-

abling disorder of unclear cause in which the shoulder capsule, the connective tissue surrounding the gleno-humeral joint of the shoulder, becomes inflamed and stiff, greatly restricting motion and causing chronic pain. Pain is usually constant, worse at night, and with cold weather. Certain movements can provoke episodes of tremendous pain and cramping. The condi-

tion is thought to be caused by injury or trauma to the area and may have an autoimmune component.

Risk factors for frozen shoulder include tonic seizures, diabetes mellitus, stroke, accidents, lung disease, connective tissue diseases, thyroid disease, and heart disease. People who suffer from adhesive capsulitis may have extreme difficulty concentrating, working, or performing daily life activities for extended periods of time.

MATERIAL AND METHODS

All classical texts available in the library of Ayurved College, hadapsar, Pune has been reviewed. Database available after net surfing was also reviewed

Signs and symptoms

Movement of the shoulder is severely restricted, with progressive loss of both active and passive range of motion. In frozen shoulder, there is a lack of synovial fluid, which normally helps the shoulder joint, a ball and socket joint, move by lubricating the gap between the humerus and the socket in the shoulder blade. Frozen shoulder occurs when the shoulder joint capsule sticks to the head of the humerus bone. This causes extreme pain and stiffness in the shoulder joint and eventually leads to immobility, followed by a long period of "thawing" in which the shoulder slowly returns to normal. The shoulder capsule thickens, swells, and tightens due to bands of scar tissue (adhesions) that have formed inside the capsule. As a result, there is less room in the joint for the humerus, making movement of the shoulder stiff and painful. This restricted space between the capsule and ball of the humerus distinguishes adhesive capsulitis from a less complicated, painful, stiff shoulder.

Diagnosis

One sign of a frozen shoulder is that the joint becomes so tight and stiff that it is nearly impossible to carry out simple movements, such as raising the arm. The movement that is most severely inhibited is external rotation of the shoulder.

People complain that the stiffness and pain worsen at night. Pain due to frozen shoulder is usually dull or aching. It can be worsened with attempted motion, or if bumped. A clinician may suspect the patient has a frozen shoulder if a physical examination reveals limited shoulder movement. Frozen shoulder can be diagnosed if limits to the active range of motion (range of motion from active use of muscles) are the same or almost the same as the limits to the passive range of motion (range of motion from a person manipulating the arm and shoulder). An arthrogram or an MRI scan may confirm the diagnosis, though in practice this is rarely required.

The normal course of a frozen shoulder has been described as having three stages:

Stage one: The "freezing" or painful stage, which may last from six weeks to nine months, and in which the patient has a slow onset of pain. As the pain worsens, the shoulder loses motion.

Stage two: The "frozen" or adhesive stage is marked by a slow improvement in pain but the stiffness remains. This stage generally lasts from four to nine months.

Stage three: The "thawing" or recovery, when shoulder motion slowly returns toward normal. This generally lasts from 5 to 26 months.^[2]

Investigations

MRI

Imaging features of adhesive capsulitis are seen on non-contrast MRI, though MR arthrography and invasive arthroscopy are more accurate in diagnosis. Shoulders with adhesive capsulitis also characteristically fibrose and thicken at the axillary pouch and rotator interval, best seen as dark signal on T1 sequences with edema and inflammation on T2 sequences. A finding on ultrasound associated with adhesive capsulitis is hypoechoic material surrounding the long head of the biceps tendon at the rotator interval, reflecting fibrosis. In the painful stage, such hypoechoic material may demonstrate increased vascularity with Doppler ultrasound.

Frozen shoulder and Diabetes ^[3]

Frozen shoulder is just one of five musculoskeletal complications that can affect people with diabetes. It is postulated that excess glucose impacts the collagen in the shoulder. Collagen is a major building block in the ligaments that hold the bones together in a joint. When sugar molecules attach to the collagen, it can make the collagen sticky. The buildup then causes the affected shoulder to stiffen, and the pain prevents you from moving your arm.

Frozen shoulder is estimated to affect about 20% of people with diabetes, compared with only 5% of people without diabetes, so clearly high blood sugar is a big risk factor.

Management

Management of this disorder focuses on restoring joint movement and reducing shoulder pain, involving medications, physical therapy, and/or surgical intervention. Treatment may continue for months, there is no strong evidence to favor any particular approach. There is tentative evidence that low-level laser therapy may help.

Medications frequently used include NSAIDs, corticosteroids are used in some cases either through local injection or systemically. Physiotherapists may include massage therapy and daily extensive stretching. If these measures are unsuccessful, manipulation of the shoulder under general anesthesia to break up the adhesions is sometimes used. All above mentioned remedies involve much risk and untoward effects of the drugs. The key part of the treatment is to reduce stiffness of the joint by reducing inflammation and Prasaranyadi kashay is very good choice of kashay which reduces the inflammation and pain by the anti-inflammatory activity of Rasana and Nagara. Prasarini is effective enough to relieve the stiffness of the joint. The result of medicine for musculoskeletal disorder like frozen shoulder depends upon the exercise you perform along with the medicine.

Principles of management

- 1) Counter the local inflammation and pain.
- 2) Use antiviral drugs to counter the possibility of underlying viral infection.
- 3) Improve immunity by using Rasayana Drugs.
- 4) Encourage the joint mobility by application of heat and gentle progressive range of motion exercises.

Exercises for a frozen shoulder ^[4]

Stretching and strengthening exercises are usually the cornerstone of treating frozen shoulder. Some of the exercises are-

1. Pendulum stretch
2. Towel stretch
3. Finger walk
4. Cross-body reach
5. Armpit stretch
6. Outward rotation
7. Inward rotation.

Ayurvedic Approach of Frozen shoulder- Avabhavuka

Avabahuka-

'Avabahuka' is the clinical condition mentioned by *Acharya Sushruta* in Nidansthana related to the shoulder joint. Aggravated *Vata* in the region of shoulder dries up the bindings (ligaments) of the shoulder constricts the *siras* present there and produces *Avabahuka*.^[5] As per *Sushruta siravedha* is contraindicated in *Avabahuka* and general treatment of *Vata* should be adopted.

Tridoshic Approach of Avabahuka

DISCUSSION

Vatadosha

Movement in the body is indicative of the presence of life. *Chesta* includes the entire activity of living body. *Vata* is the cause of such movements. The meaning of the word *Va gati* are motion, moving and going.^[6] The movement in the body is expressed by the contractions and relaxations of the muscles. In Frozen shoulder such movements are hampered due to stiffness in the glenohumeral joint due to vitiation of *Vata dosha*. *Vata* is *tantrayantradhara*. *Tantram* is the body and *yantram* indicates the machine along with its parts viz. in relation to the human body, the *sira*, *snayus*.^[7] *Vata* is upholder or sustainer of both the structure or parts or their functions in the body.

Kaphadosha

Kapha is the product of water^[8]. The verb *slish* means to embrace, to cohere or to keep together.^[9] The seat of *kapha* is *siras*, *griva*, *kantha*, *bahu*. The general function of *kapha* is promotion of *Snehana* (unctuousness), *bandhana* (binding or keeping together), *Sthiratva* (steadiness and sturdiness) of the body firmness and compactness. *Kapha* is related with *Visargakarma* i.e. creation of strength. *Acharya Sushruta* has mentioned

Sandhisansleshana (keeping together and lubrication of the joints of the body) is the function of *kapha* due to *snigdha guna*.^[10] *Asthisandhis* are covered by *snayus* and *pesis* which confer strength on them. In Frozen shoulder the vitiated *vata* is responsible for the contraction (*Sankoch*) and stiffness (*stambha*) of the shoulder joint. At the same time as mentioned by *Acharya vagbhata*, the typical symptoms of vitiated *kapha* due to *guru*, *pichhila*, *stimit*, *sheet* and *snigdha guna* observed are *bandha* (obstruction), coating inside the channels (*upalepa*), *staimitya* (loss of movements). The normal cohesive property of *kapha* (*slish alingane*) is much more increased results into the occurrence of symptoms like *bandha* and *staimitya*. So aggravated *Vata* due to *ruksha guna* dries up the bindings of the shoulder girdle and aggravated *kapha* due to *guru*, *sheet*, *staimitya guna* brings out stiffness of the joint which hampers the range of motion of the joint. *Sheeta guna* of *vata* is *Apatarpan* in nature and of *kapha* is *Santarpan* in nature. So *kaphavatahar* treatment in the form of *Prasaranyadi kashay* can be adopted.

PRASARANYADI KASHAY^[11]

Reference – Sahastra yogam kashay Prakaranam.

Ingredients – *Prasarini*, *Masha*, *Bala*, *Rasona*, *Rasna*, *Nagara*

Dosage – 15 ml daily with four times luke warm water one hour before food.

It is very nice formulation mentioned in *kwath prakaram* of *Sahastrayogam* having two *rasayana* drugs *Rasona* and *Nagara*. The word *Prasarini* itself meaning that it relieves the stiffness of the joints. *Prasarini* is *Kaphavataghna* and *ushnaveerya* in nature. It is tissue stabilizer, hot in potency,

cure *vata* diseases associated with *kapha*. In Frozen shoulder there is stiffness, inflammation and pain of joint which is relieved by the anti-inflammatory property of *Rasona*, *Nagara* and *Rasna*. They are *kaphavatahar* in nature helps to relieve the stiffness and inflammation at the joint. Frozen shoulder is the condition of *Kapha vata* spectrum. Here pain is associated with stiffness. Out of six contents of *Prasarnyadi kashay* four (*Prasarini*, *Rasona*, *Rasna*, *Nagara*) are *kaphavatahar* and *ushnaveerya* which reduces the inflammation at glenohumeral joints which facilitates the range of motion of shoulder joint. *Nagar* is '*Vibandhbhedini*' [12] which is useful to relieve the adhesions in the capsule. *Rasona* is tissue vitalizer. *Bala* and *Masha* are guru required to stabilize the joints. The *ushnaveerya* of the drugs helps to relieve the adhesions in the capsule. The information regarding the contents of *Prasarnyadi kashay* is attached in **Table no 1**.

CONCLUSION

Prasarnyadi kashay, mentioned in the *Sahasrayoga* is very good choice for treating Frozen shoulder which combats the stiffness as well as pain at shoulder joint. The word *Prasarini* itself means it helps to relieve stiffness and facilitate the movements. The *Prasarnyadi kashay* along with appropriate physical exercise is effective to enhance the range of movements in the Frozen shoulder.

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REFERENCES

1. https://en.wikipedia.org/wiki/American_Academy_of_Orthopaedic_Surgeons
2. <http://www.healthline.com/health/frozen-shoulder#Diagnosis5>
3. <http://www.healthline.com/diabetesmine/the-411-on-diabetes-frozen-shoulder#1>
4. <http://www.health.harvard.edu/shoulders/stretching-exercises-frozen-shoulder>
5. Susruta, Dalhana, Susrut Samhita Nidana Sthana, first chapter, Chaukhambha Orientaliya.
6. Susruta, Dalhana, Susrut Samhita Sutra Sthana, 21/5, Chaukhambha Orientaliya.
7. Agnivesh, Charaka, Dhridhabala, Chakrapani. In: Trikamaji VJ, Editor Charakasamhita Sutra sthan, 12/8 Varanasi: Chaukhambha Orientaliya.
8. Shabdastomamahanidhi.
9. Susruta, Dalhana, Susrut Samhita Sutra Sthana, 21/5, Chaukhambha Orientaliya.
10. Susruta, Dalhana, Susrut Samhita Sutra Sthana, 21/8, Chaukhambha Orientaliya.
11. Sahasrayoga, Dr. D.V. Panditrao, kendriya Ayurved evam sidhha anusandhan parishad, New delhi 1990.
12. Bhavmisra, Dr. Bulusu sitaram, first edition 2006, Chaukhamba Orientalia, Varanasi.

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Table no 1. Formulation of Prasaranyadi Kashay

	<i>Prasarini</i>	<i>Masha</i>	<i>Bala</i>	<i>Rasona</i>	<i>Rasna</i>	<i>Nagar</i>
Gana			Balya, Pra-jasthapana			Truptighna, Arshogna, Deepneeya, Panchakola
Kula	<i>Manjishtha</i>	<i>Leguminosae</i>	<i>Karpas</i>	<i>Rason</i>	<i>Bhrungraj</i>	<i>Haridra</i>
Family	<i>Rubiaceae</i>	<i>Fabaceae</i>	<i>Malvaceae</i>	<i>Liliaceae</i>	<i>Compositae</i>	<i>Scitamineae</i>
Latin Name	<i>Parderia foetida</i>	<i>Phaseolus Mungo</i>	<i>Sida Cordifolia</i>	<i>Allium sativum</i>	<i>Inula recemosa</i>	<i>Zingibar Officinale</i>
English Name	<i>Chinese flower plant</i>	<i>Black Gram</i>	<i>Country Mallow</i>	<i>Garlic</i>		<i>Dry Ginger</i>
Sanskrit Name	<i>Prasarini, Bhadraparni, Rajabala, Pratatini, Bhadra, bala, katambhara</i>		<i>Odantika, Bhadra, Samanga, Vatika, Kharyash-tika, Sheetapaki.</i>	<i>Arishta, ugragandha yavaneshta, Mahauashadha, Bhutaghna, rasayanavara</i>	<i>Elaparni, Rasya, Elaparni, Surasa, Gandhan kuli</i>	<i>Vishva, Vishvabheshaj, Katugranthi, Sauparna</i>
Rasa	<i>Tikta</i>	<i>Madhur</i>	<i>Madhur</i>	<i>Pancharasa (Lavan varjit)</i>	<i>Tikta, Katu</i>	<i>Katu</i>
Veerya	<i>Ushna</i>	<i>Ushna</i>	<i>sheeta</i>	<i>ushna</i>	<i>Ushna</i>	<i>Ushna</i>
Vipaka	<i>katu</i>	<i>Amla, Madhur</i>	<i>Madhur</i>	<i>katu</i>	<i>katu</i>	<i>Madhur</i>
Guna	<i>Guru, sara</i>	<i>Guru, snigdha, balya, shukrala,</i>	<i>Guru, snigdha, picchila</i>	<i>Snigdha, teekshna, picchila, guru, sara</i>	<i>Guru, ushna.</i>	<i>Laghu, snigdha</i>
Doshgh-nata	<i>Kaphav- ataghna, Pit-tasarak</i>	<i>kaphapit-takar</i>	<i>Vatapitta shamak, kaphavardhak.</i>	<i>Kaphav- ataghna, raktpittavardhak.</i>	<i>Kaphav- atatahar.</i>	<i>Kaphavatahar.</i>
Parts used	<i>Root and leaves</i>	<i>seeds</i>	<i>Root, seeds, leaves.</i>	<i>bulb</i>	<i>rhizome</i>	<i>rhizomes</i>
Active principle	<i>Paedersoidic acid, paederoside, scandoside, tyrosine, histidine, ur-solic acid</i>	<i>Protein, fat, carbo-hydrate, calcium, phosphorus, iron.</i>	<i>Roots- acyl- steryglyco- side, ephed- rine, seeds- phytosterols, steroids.</i>	<i>Allinase en- zyme, thiogly- coslides like scordine, B group vita- mins, amino acids.</i>		<i>Gingerol</i>