



Review Article

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ETIOPATHOLOGICAL STUDY OF AVABAHUKA WITH SPECIAL REFERENCE TO FROZEN SHOULDER: A REVIEW

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ABSTRACT

Avabahuka is a Vatavyadhi, which in contemporary science can be correlated with frozen shoulder on the basis of sign and symptoms. Though not major disease but hamper the routine domestic activities, like combing, brushing and mostly affect the sleep which bring the patient to physician. Its prevalence rate is 1 among 50. In Avabahuka, there are- pain, stiffness, restricted movement of shoulder joint, wasting of muscle etc. the site Amsasandhi may correlate with shoulder joint. Though it is self-limited, but recover within 3 years. But this period is unbearable. So by evaluating the exact pathogenesis of Avabahuka it can prevent and treat. According to Ayurveda, it is Vata Vyadhi, so come under Astamahagada. Susruta and Vagbhatta mention Avabahuka directly under Vatavyadhi. Though Caraka mention 80 types of Nanatmaja Vyadhi, but clearly mention that it is innumerable and produce many disease according to site where aggravated Vayu located. On the basis of these it is try to find out the etiology and pathogenesis of Avabahuka which can give a preventive measure and early intervention

Keywords: Avabahuka, frozen shoulder, Vatavyadhi, Amsasandhi, Pain, Stiffness

INTRODUCTION

Avabahuka, it is such a disease which is under Vatavyadhi and in contemporary science can be correlated with frozen shoulder on the basis of sign and symptoms. The disease Avabahuka is not mentioned by Caraka directly under the 80 types of Vatavyadhi but Susruta and Vagbhatta mentioned it.^{1,2} It occurs in Amsasandhi (shoulder joint). In this ultra-modern era due to change in life styles, sedentary work and food habits, people are unable to follow the Dinacharya (daily regimen) and Ritucharya (seasonal regimen) which are explained in our texts. Most of us spend a lot of time in front of computer, TV, riding motor vehicle etc. and this posture doesn't allow a good movement of the shoulder. This led to an increased prevalence of Avabahuka (frozen shoulder), about 2-5%.^{3,4} It is a Vatavyadhi, so the etiopathogenesis of Avabahuka is same as Vatavyadhi.

So with the help of etiology and pathogenesis of Vata Vyadhi it is try to find out the etiology and pathogenesis of Avabahuka.

Conceptual study

Etiological factor of Avabahuka: Avabahuka is a Vatavyadhi so etiopathogenesis of Avabahuka is same as Vatavyadhi. The etiopathogenesis factors are as follows

- Aharaja (dietic): Lentil, Mudga, Dry vegetables, foods which make constipation (vistambhi), low calorie diet, excessive fasting, cold food item, excessive intake of spicy, bitter food, light food etc.
- Viharaja (behavioural): Bhraman (Excessive journey), loading and unloading of stone, wood etc. Duhkhkshaya

(uncomfortable sleep), Bharbahana (loading), Vichesta (wrong posture), Ativyama(excessive exercise), Ativyavaya (excessive sexual indulgence), Atiplavana (excessive swimming), Atibhasya(excessive talking) etc.

- Kalaja (seasonal): Varsharitu (spring), Aparahna (evening), Sisira (cold season) etc,
- Manasik (mental): Bhaya (fear), Chinta (tension), Utkantha (anxiety), khobha(grief), krodha (anger) etc.
- Agantuja (external) Marmabhighataja (injury in vital point) , Prapatan (falling) etc.
- Anyahetuja (miscellaneous): Dhatukshaya (depletion of tissue), Atiyoga of virechana (excessive purgation), Rogatikarsh (due to chronic disease).

Pathogenesis

Pathogenesis is one among Panchanidana. It is the way in which the Doṣa gets vitiated and the course it follows for the manifestation of disease⁵. A proper understanding of pathogenesis is vital for the treatment, because treatment described in the

Ayurvedic text is nothing but Samprapti Vighatana⁶

The disease Avabahuka is under Vatavyadhi. So, the pathogenesis of Avabahuka is like the Vatavyadhi. A common pathogenesis is described for every Vatavyadhi. But, according to site it's different so description is necessary.

In the scapular region the Upadhatu of Rakta, the Sira(vein) and Snayu (tendon), are the cause of tying the muscle, for unrestricted movements in a painless situation and for proper nutrition. But when Vata gets aggravated with properties like Rukṣa (dry) due to various Vata Prakopa Nidana given in above paragraph cause

the Soshana (dryness) and Samkocha (constriction) of Sira and causes painful and restricted shoulder movement. Tendon or Snayu and Sira (vein) are the Upadhatu of Rakta.⁷ And Mamsa or pesi is the next Dhatu of Rakta. Smooth movements of muscles are governed and nourished by Sira or veins (nourished by arteries and rejected/ ejected/ excessive blood is carried out by Sira). This is very important factor of about how the muscle, tendon are working smoothly when the circulatory energy of Vata is normal. The kinetics of Vata fill with aggravated Ruksha Guna is the main cause of Avabahuka. by Ruksha Guna it dries up the Sleshak Kapha, for which Sira and Snayu gets no nutrition, so Shosan and Samkocha of muscle takes place.

As Avabahuka is considered a VataVyadhi and the Prodromal features like Bahuprasanditahara (restricted movement) and Sula (pain) may manifest mildly or are totally absent. But the above symptoms are clearly manifested in the Vyaktha Avastha or in Roopa Avastha in shoulder joints. Any external trauma to shoulder joint may cause Bahya Marmbhighata to the Amsa Marma (a vital point) present in shoulder joint. Because this is a snayu⁸ and Vaikalyakara Marma,⁹ by afflicting Snayu (tendon) will manifest Bahuprasanditahara (restriction of movement).

In Vatavyadhi the common pathology is though same but it vary according to site, because different body parts are present in different sites, according to that pathogenesis occur and produced different sign and symptoms. In Avabahuka the disease occur in shoulder joint, where Sleshaka Kapha (synovial fluid) is remain,¹⁰ when the Vata gets not physiological movement and increase than its normal level then it dry up the synovial fluid and the body parts nourished by it become shrink. In Sandhi (joints) there is Snayu (tendon), Sira (vein) etc.¹¹ which abstain from getting nutrition. So, the symptoms produced in Avabahuka is like Stambha (stiffness), Sula (pain), Sira Akunchan which leads restriction of shoulder joint movement etc. Gradually, the Sleshaka Kapha (synovial fluid) is dry up then Sandhigata Vata Lakshana occurs as Atopa (crepitation).¹²

DISCUSSION

The disease Avabahuka implies here bad arm, the exact location of which is in Amsasandhi (shoulder joint). These occurs mainly in the age group 40-60 years.

Etiology

The etiology of Avabahuka is same as Vatavyadhi. Some act as predisposing, some are precipitating and some are provoking factor. Here dietetic regimen act as predisposing factor, but these alone cannot developed Avabahuka because these factors not make any damage in shoulder joint. Viharaja and Agantuja (external factor) act as precipitating factor, these make damage in Amsasandhi (shoulder joint), which is an important factor to develop a disease again Kalaja (seasonal factor) and Manashika (mental factor) act as provoking factor because the disease increases according to change of the climate and mental factor. All the mental factors mentioned here increase Vata.

Aharaja

Food items: The foods which are mentioned in texts is not used these days except some food. And all the foods are used as per availability in respected areas. Continuous taking of this food produce Vatavyadhi. They have increased Vata by taste, properties, potency etc.

Properties of food: Here the substances which has dry, Light, cold properties increase Vata because Vata has these qualities. These

days it can say that the diet which is without ghee, oil all are Ruksha (ununctous) e.g. continuous taking of chapatti or rice without any ghee or oil. Most of the time taking dry biscuit etc. Light food means which are digest easily, it may be diet which has less nutrition or diet in very less amount. These light diets are unable to make Dhatu (body tissue), so Vata is increase here. Sita(cold) substances has the property to increase Vata, so these days the excessive use of chill water, cold drinks can increase Vata.

Tastes of food: The taste pungent, astringent, bitter increase Vata. Now-a-days excessive spicy foods are taken by people as chat, chowmin which has pungent taste.

Action of food substances: The diet which can produce vistambha (constipation) increases Vata. These diets make upward direction of Vata during its digestion. Now the pizza, burger, hot dog, sandwich etc. come under Vistambhi diet. These lead constipation.

Potency of food substance: Here the foods which has cold potency acts in the body by Sita (cold) property which increases vata.

Matra (amount of food): Abhojana (fasting) is done by people for a long period, these days also used to do fasting. Fasting, which girls are used to do these days as dieting to maintain the beauty. And due to poverty also people used to take less amount of food which increases Vata. Irregular food habit due to work load increase these days. There are many jobs where field works are mandate, e.g. in different type of representative, in ferry workers these etiologies are found.

Kala (Time): In case of taking diet, time has a prime role, Adhyasana is such a factor where people used to take food before digestion of previous food. These days people have more social network, so attending different kind of party frequently in same day create Adhyasana. Which produced Ama and by making obstruction produced Vata Vyadhi. Again, after digestion of food Vata increases, so too much gap should not be between two diet. These days this occur due to engaged in study, work in office, household work of women etc.

Viharaja (behavioral)

Mithayoga (False behavior): Asmabhrama, Asmachalana, Asmavikshepa, Asmaultksepa etc. are seen in people who work in road making, building making, where stones are mainly involved. Balavatvighraha (excessive body movement) is found in professional wrestler, accidentally who fight with someone who is stronger than him. Divaswapna (day sleep) is mostly found in housewife. These form Ama due to improper digestion. Damygajanigraha (riding on animal) was found in ancient time, these is very rare these days. Duhkhasana, Dukhshaya (Uncomfortable sitting, uncomfortable sleeping) etc. are found in case of who travel frequently in bus, train for which he has to sit or sleep for 1 or 2 night very uncomfortable, in case of businessmen e.g. sometimes sit very uncomfortably for whole day, working as gold maker, people sleeping without mattress etc. In this way stone, wood, heavy metal like iron etc. are loaded and unloaded, these days in different field e.g. the people who work in wood industry, who work in forest department as labour, in case of blacksmith, in case of the person who work in cutting hill. Bharbahana (loading) found in these days mostly kuli in railway station, some ferrymen loading head, person work in loading and unloading industry etc. Vegdharana (suppression of natural urges) takes place due to busywork life, people have no time to maintain daily routine work due to competitive lifestyle. Due to growing technology population increases, so competition also

increases. Vishesta (wrong posture) is very common causes for Vata Vyadhi, people drive car, auto, truck etc. continuously for many hrs., gold maker doing their job continuously by hand, tailor, cobbler, some ferryman holding their things by hand, painter, watching T.V. continuously, doing work in front of computer, studying in a uncomfortable manner etc. all do their work in wrong posture which come under Vichesta.

Atiyoga (excessive engagement in work): Atibhasya (excessive talking) is seen in teachers, some representative under different job, political leader, which increases Vata, Atiplavana (excessive swimming) is seen in professional swimmer, Atiadyana (excessive study) is generally found these days in competitive examination, final examination etc. Adysana (excessive sitting) is seen in case of shopkeeper, where there may be Ama formation due to lack of physical activity or may be wrong posture. In ancient time there was elephant, horse, chariot etc. but these days different vehicle like car, bike, truck etc. are available and continuous using of these may leads different Vatavyadhi because these leads abnormal movement of the body, Atiratrijagarana (awakening at night) is found in professional singer, night watchman, hospital nurses at night duty, police on night duty, call centre worker on night etc. all these vitiate Vata.

Agantuja (external factor)

Abhighataja: Different kind of injury, fracture etc.

Gajastraswasighrayanpatansanata (falling from the running vehicle ride by elephant, camel, horse): These days though these types of vehicle are not found but falling from other available running vehicle is found common for which injury can takes place.

Marmabhighata: Injury in the vital organ, like head injury in different accident

Manasika (Mental factor)

Mental factors include Bhaya (fear), Chinta (worry), Krodha (anger), Shoka (grief), Utkantha (anxiety).

These factors are increasing day by day though these factors are same as ancient time but the causes are different, due to more competition in society, lack of time for over working which leads more anger etc. Caraka said that Soka, Bhaya etc increases Vayu, again he said in Soshanidana chapter that anger decreases the Hridaysthita Oja (essence of tissue) and by this depletion of tissue takes place.

A. Kalaja (Seasonal factor): Vata is increased in some respective time, like Abhra (during cloudy season), Aprahna (evening), Grişma (summer season), Pravata (windy day), Sisira (winter day), Sitakala (early winter), Varsha (rainy season).

B. Anya hetu (Miscellaneous causes):

Ama : Ama is the undigested material, which may be due to day sleep, due to regular taking of Vişambhi Dravya (which is difficult to digest) etc., Asriksrava (blood loss) due to various accident may lead Vatavridhi, Dhatukshaya (loss of body elements), Doshaksaya (according to commentator Purisha and Mutrakshaya) leads to Vatavyadhi like in diarrhoea, diabetes mellitus etc. Rogatkarshana (emaciation due to diseases) leads to Vatavyadhi.

Pathogenesis

The Ruksha guna is lone cause of the pathology, remaining factor are uninvolved or may be in physiological status. It is seen in Avabahuka that the structures around the shoulder joint dry up and not get any nutrition, for which the organ abstain away from its normal function, pain is develop. 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 (upper arm bone) and the socket in the scapula (shoulder blade). 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 developed painful, stiff shoulder. Here all the active and passive movements of shoulder are loss equally.

CONCLUSION

Avabahuka is a common musculoskeletal problem in today's life, though not a major problem but it hamper daily activities. To prevent it is very necessary to know the etipathogenesis of the disease, because in these days use of steroid, pain killer, and at surgery is the choice of treatment which are still not fruitful. So early diagnosis of Avabahuka and its prevention is found effective if there is a well-known pathogenesis.

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