Review Article

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CONCEPT OF APABAHUKA IN THE LIGHTS OF MODERN SCIENCE: A REVIEW

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ABSTRACT

Apabahuka is one among the vatavyadhi (diseases due to vitiated vata dosha) which affects the normal functioning of the upper limbs thereby the normal routine lifestyle of an individual is affected too. The only classical symptom explained regarding Apabahuka is bahupraspanditahara (restricted movement of affected shoulder). Whereas, some of the other symptoms clinically observed are pain in the affected shoulder, stiffness, muscle wasting etc. On analysing the etio-pathogenesis, it can be understood that the disease Apabahuka manifests due to both dhatukṣaya (due to tissue loss) as well as marga avaraṇa (due to obstruction of vata dosha by one or more doshas). While comparing with modern science, most of the shoulder joint pathologies such as Adhesive capsulitis, Rotator cuff Injuries, Bicipital tendinitis, Cervical spondylosis, Osteoarthritis of the shoulder joint etc. can be incorporated under the broad heading 'Apabahuka'. The present paper deals with some of the possible modern correlations of Apabahuka.

Keywords: Apabahuka, Vatavyadhi, Adhesive capsulitis, Rotator cuff injuries, Bicipital tendinitis.

INTRODUCTION

Apabahuka is considered to be an urdhvajatrugata vata vikara (disorders due to vitiated vata dosha above the collar bone), which impairs the normal functioning of the upper limb. India being a developing nation, comprising of hardworking agriculturists, laborers etc. and hence, the incidence of Apabahuka is relatively high. It is one such condition, although not fatal, causes deleterious effect on the individual resulting in restriction movement of upper limb, affected shoulder joint pain etc. Apabahuka comprises of two words viz. 'Apa' and 'Bahuka'. In our classics both the terms Apabahuka and Avabahuka can be noted in different contexts. The prefix 'Ava' used as alternate for 'Apa' in some texts gives the meaning as away down[1], Viyoga, Vikrtau[2] means dysfunction, separation[3]; stiffness in the arm joint[4]. According to Acharya Sushruta, Bahu is one among the shadanagas[5] (6 parts of the body), meaning upper limb. By above discussion, it can be summarised as the term Apabahuka or Avabahuka represents "dysfunction of bahu" (stiffness or disability in the arm).

Sushruta samhita and Ashtanga hridaya has described Apabahuka under vatavyadhi adhikara (diseases due to vitiated vata dosha). Apabahuka, as a separate entity is not explained in Charaka Samhita. However, Charaka Acharya has mentioned a term called Bahushirsha gata vata[6]. Amsa shosha[7] (muscular dystrophy around shoulder joint) and Apabahuka are the two separate entities mentioned in Madhava nidana. In this article, different views of different acharyas are compiled regarding Apabahuka and is correlated with its possible modern diagnosis.

Definition

Vitiated vata located at amsamula (root of the shoulders) causes siraḥ sankocha (constriction of veins presents there) and produce Apabahuka which results in Bahupraspanditahara[8] (loss of movement of the arm). On the other hand, Acharya Sushruta points out that the aggravated vata dosha localised in the amsa desha (shoulder region) dries up the binding (ligaments) present there, resulting in constriction of siras[9] (veins) and finally leading to Apabahuka. According to Madhava nidana, Vayu localised in the shoulder region causes atrophy of the structures binding the shoulder joint which is known by the diseased condition Amsa sosha[10]. When the same (atrophy around the shoulder joint) is produced by vitiated vata leading to the contractures of the surrounding ligaments, the condition is known as Avabahuka[11].

Causative factors

No samhitas has described specific nidanas (causative factors) for Apabahuka. As it is described under vatavyadhi, the general etiological factors for vatavyadhi can be considered here such as excessive intake of dry, cold, light diet and improper regimens like suppression of natural urges and mental factors such as anger, grief[12] etc.

Specific causative factors

Marmabhighata (trauma to the marmas) is one of the causative factor that has been mentioned under vatayadhi nidanas. In total, Acharya Charaka and Sushruta have identified 107 Marma in the body where Sushruta has elaborated all the types. While looking after the Lakṣhaṇas (symptoms) mentioned for the Marmabhighata, it is said that the Amsa Marmabhighata (trauma to the amsa marma), where the Bahu lose its function and becomes stiff which resembles the symptoms of Apabahuka[13]. Hence, Marmabhighata is also considered as one of the specific Nidana for Apabahuka.

Prodromal symptoms

There are no specific purvarupa (prodromal symptoms) of Apabahuka mentioned in our ayurveda samhitas. Avyakta Lakṣhaṇas (unclear symptoms) are mentioned as the purvarupa of vatavyadhi[14]. Chakrapaṇi comments on this term that Avyakta means alpa (mild) or iṣat (minimal) vyakta. Hence, in case of Apabahuka, minute or negligible form of symptoms produced before the actual manifestation such as mild restricted movements of affected shoulder joint, vague shoulder pain, mild stiffness in the upper extremities and other similar symptoms of Apabahuka in its minimal severity can be considered as purvarupa.

Clinical features

Apabahuka can be categorized as a sthanika vikara (localized disorder) rather than sarvadaihika Vikara (generalised disorder). The only classical symptom explained is Bahupraspanditahara[15]. Bahu means upper limb; Praspandana means Movement or Chalana[16] and Hara can be taken as Loss of /impaired/ difficulty. Here, in the present context, Bahupraspanditahara can be taken as difficulty in the movement or impairment or loss of movement of upper limb.

The other clinically seen symptoms are amsa sandhi shoola (Pain in the affected shoulder joint), stambha (Stiffness), sosha (muscle wasting).

Aggravating and Relieving factors

In case of Apabahuka, use of shoulder joint during physical work aggravates the condition. On the other hand, hot fomentation and rest gives relief. So, the factors aggravating Vata are said to be Anupashaya (aggravating factors) and pacifying factors of Vata are Upashaya (pacifying factors). By abhyaṅga on the shoulder, some relief from the symptoms is seen. If the symptoms subside, we can infer it as kevala vataja Apabahuka (Apabahuka due to vitiated vatadosha alone). On the other hand, if the symptoms aggravate on application of oil it is indicative of Kapha avarana janya Apabahuka (Apabahuka due to obstruction of vata dosha by vitiated kapha dosha).
Apabahuka should be differentiated with the following conditions which affects the upper limb.

Vishwachi: This condition shows close resemblance with that of Apabahuka. This condition may be differentiated from that of Apabahuka by the typical presentation of pain radiating from the upper arm to forearm and palms[17]. Also, it is distributed from the back of the neck to the tip of fingers. Contrary to this, the pain in Apabahuka does not radiate. The pain is more or less restricted to the amsa pradesha.

Ekangavata: Weakness of the affected upper limb and the features of akarmanya (loss of function) and vichetana (sensory loss) are the characteristic features observed here[18]. Pain and stiffness of the affected upper limb are the associated features. The main differentiating factor of ekanga vata from other conditions are impairment of voluntary activities. Whereas in Apabahuka, symptoms like difficulty in movement and pain occurs only in the amsa pradesha.

Amsashosha: This being mentioned as a separate entity by Madhavakara[19], it should be differentiated from Apabahuka. It can be differentiated by the presence of mamsa kṣhaya (depletion of fatty tissue) or soṣha in amsa pradesha (muscular atrophy around shoulder). Pain is not the diagnostic criteria in aṁsa soṣha but mandatory in Apabahuka and Vishwachi.

Treatment

Aṣṭanga hṛidaya and Astanga sangraha highlights Nasya and Uttara Bhaktika Snehapana[20, 21] as the Visheṣa Chikitsa in Apabahuka. In Yogaratnakara, Vatavyadhi Chikitsa, Bahu parivartana[22] (movements of shoulder joint) has been mentioned as an effective remedy in Apabahuka, which may be correlated with Physiotherapy nowadays.

Modern perspective

Some of the common clinical conditions of modern science, which may be compared with that of Apabahuka are as follows –

- Adhesive capsulitis or Frozen shoulder.
- Rotator cuff tendinitis and impingement syndrome
- Cervical spondylosis
- Bicipital tendinitis
- Osteoarthritis of shoulder joint etc.

Adhesive capsulitis[23]

The layman term used in case of Adhesive capsulitis is "Frozen shoulder". Pain and restricted movement of the shoulder, usually in the absence of intrinsic shoulder disease, are the most presenting complaints. It may be associated with systemic disorders such as Myocardial infarction, Diabetes mellitus etc. Development of Adhesive capsulitis usually occurs due to prolonged immobility of the arm as in bed ridden patients. Patients often complains of night pain which disturbs their sleep. On palpation, the shoulder is tender and both active and passive movements are restricted. Main pathology is that the capsule of the shoulder is thickened and a mild chronic inflammatory infiltrate and fibrosis may be present.

The diagnosis is made by physical examination and can be confirmed by arthrography. The main foundation of treatment for this condition is Physiotherapy. Local injections of glucocorticoids and NSAID's may also provide relief of symptoms. Manipulation under anesthesia may be helpful in some patients.

Rotator cuff tendinitis and Impingement syndrome[24]

Rotator cuff tendinitis, which results due to inflammation of the tendon(s), is one of the major cause of painful shoulder. Supraspinatus tendon is the most often affected. This is because of its repeated impingement (impingement syndrome) between the humeral head and the undersurface of the anterior third of the acromion and coraco-acromial ligament and also due to reduction in its blood supply on abduction of the arm. Pathology begins with edema and hemorrhage of the rotator cuff which evolves to fibrotic thickening and eventually to rotator cuff degeneration with tendon tears and bony spurs. Clinical features include pain in the shoulder on abduction and external rotation, night pain, local tenderness and loss of range of movements. MRI and Ultrasound are employed for diagnostic imaging. Initially, this condition is managed by rest, use of NSAIDs, Physical treatment including heat application and range of movement exercises. If symptoms persist for more than 2 to 4 weeks, then injections of corticosteroids into nearby sub acromial bursa are beneficial. Surgery is indicated for unbearable pain and severe functional impairment.

Cervical spondylosis[25]

Cervical spondylosis is the term given to the occurrence of Osteoarthritis in the cervical spine. Most commonly affected are

C4-C5; C5-C6; C6-C7 vertebral levels. It is caused by a degeneration of the intervertebral discs, which fragment, lose water content, and collapse with normal aging. Disc degeneration causes increased mechanical stress at the cartilaginous end plates at the vertebral body lip, resulting in the formation of sub periosteal bone or osteophytic bars that extend along the ventral aspect of the spinal canal and in some cases, encroach on nervous tissue. Clinical features seen are pain in the neck that may radiate in the distribution of the affected nerve root, neck is held rigidly and neck movements may exacerbate pain, paresthesia and sensory loss may be found in the affected segment. Management is by treatment with analgesics, physiotherapy. If conservative management fails, foraminotomy or disc excision is advised.

Biceps tendinitis[26]

Bicipital tendinitis can be defined as the inflammation of the tendon around the long head of the biceps muscle as it passes through the bicipital groove. Deep, throbbing ache in the anterior shoulder forms the main characteristic feature in this condition. Usually, pain is localized to the bicipital groove and often radiate towards the insertion of deltoid muscle or down to the hand in a radial distribution. Pain usually worsen at night, especially if patient sleeps on the affected shoulder. Repetitive overhead motion of the arm causes exacerbation of the symptoms. Bicipital groove point tenderness with the arm in 10 degrees of internal rotation forms the most common clinical finding in bicipital tendinitis. Conservative treatment for this condition are rest, ice, oral analgesics, physical therapy and corticoid injection into the bicipital sheath. If conservative measures fail after three months, or if there is severe damage to the biceps tendon, surgery should be considered.

Osteoarthritis of the shoulder[27]

Although not as prevalent as OA of the hip or knee, patients of OA of the shoulder perceive that the impact is comparable with that of chronic medical conditions such as congestive heart failure, diabetes, and acute myocardial infarction. OA of the shoulder occurs due to destruction of the articular surface of the humeral head and glenoid, resulting in pain and loss of function of the affected shoulder. It can be primary or secondary. Primary OA is diagnosed when there is no predisposing factors that could lead to joint malfunction. Secondary OA may occur as a result of chronic dislocations and recurrent instability, trauma, surgery, avascular necrosis, inflammatory arthropathy and massive rotator cuff tear. Treatment forms activity modification, physical therapy, anti-inflammatory drugs (NSAIDs), and Intra-articular injections.

DISCUSSION

Formulation of differential diagnosis that leads to an accurate diagnosis and timely therapy[28] forms the main goal of musculo-skeletal evaluation. Apart from the referred causes, the common causes for shoulder pain includes involvement of extra capsular, acromio clavicular and glenohumeral joints[29] which can be invariably related with bahu (shoulder) being the area of pathology as per Acharya Susrutha. There are several urgent conditions that must be diagnosed promptly to avoid significant morbid and mortal sequelae[30]. Amsashosa can be considered as an upadrava (complication) which is relatively an evolved state of muscle wasting that occurs as the disease progresses. The basic approach for the evaluation of patients with musculoskeletal complaints are anatomical localization of complaint (articular vs non articular), determination of nature of the pathological process (inflammatory vs non-inflammatory), determination of extent of involvement (mono articular, poly articular, local, widespread), determination of chronology (acute vs chronic) and formulation of differential diagnosis[31]. Many of the musculoskeletal disorders mimics each other at first, and some may take weeks or months to evolve into a readily recognizable diagnostic entity. This consideration should tempt the physician to establish a definitive diagnosis at the first encounter[32]. The outcome of the physical examination is to ascertain the structures involved, the nature of the underlying pathology, the functional consequences of the process, and the presence of systemic or extra articular manifestations[33]. Although in most cases, mere physical examination will not be sufficient enough for the probable diagnosis there is a greater reliance upon specific maneuvers and imaging for assessment[34]. A physician should not limit his examination to musculoskeletal system only but rather should aim at including nervous system for the specificity of probable diagnosis. Moreover, an auxiliary position for metabolic factors should also be included under the treatment protocol further unanimously dietary modification should be implemented for betterment.

CONCLUSION

Recent works on the same topic depicted mostly with the prospect of understanding Apabahuka mainly as Adhesive Capsulitis. Rather than limiting the same under a specific diagnosis, there should be a propulsion in identifying it under different probable diagnosis. Furthermore, significant areas of research must be carried out on this specific field of study in order to come to an appropriate conclusion for diagnosis and co relation with Apabahuka.

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