Vishwachi (Cervical Radiculopathy) and its management- A Conceptual study

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Abstract –

Pain is the most complicated area of human experience. An unpleasant sensory and emotional experience associated with actual or potential tissue damage, or described in terms of such damage. In this disease severe and throbbing type of pain which radiates from neck, shoulder, arm, forearm, & digits is experienced. It is also associated with numbness and emaciation of upper limbs and its muscles. Pain from posterior part of finger and anterior side of prakoshtha and kandara affect motor function.

Disease spreading from posterior part of fingers and anterior part of prakoshtha and kandara which affects the nerve in hand and by affecting the motor function known as vishwachi. Thus Nasya, Abyanga, Swedana, Nasya and Niruha, Matrabasti becomes the line of treatment.

Keywords: Abyanga, Swedana, Nasya, Niruha, Matrabasti

Introduction –

Ancient Ayurveda is having lot of importance in treating several diseases successfully using various potential drugs and apt methods. Even though there are certain remedies Explained in our classics, now after thousand years there is a need to evaluate the above diseases according to present conditions with proper parameters and measures. Pain is the most complicated area of human experience. An unpleasant sensory and emotional experience associated with actual or potential tissue damage, or described in terms of such damage (1). In this disease severe and throbbing type of pain which radiates from neck, shoulder, arm, forearm, & digits is experienced. It is also associated with numbness and emaciation of upper limbs and its muscles. Pain from...
posterior part of finger and anterior side of prakoshta and kandara affect motor function.

Disease spreading from posterior part of fingers and anterior part of prakoshta and kandara and which affects the nerve in hand and by affecting the motor function known as vishwachi. By Dalhanacharya verse it is clear that in vishwachi posterior part of hand anterior nerves of hands should be included. Word kandara refers to Vatanadi. It resembles with Cervical Radiculopathy. A population-based analysis in Rochester, Minnesota, reported an annual incidence of cervical radiculopathy of 107.3 per 100,000 for men and 63.5 per 100,000 for women with a peak at 50 to 54 years of age (2). And prevalence of 3.5 cases per 1000 population(3).

Prevalence of neck pain in obese individuals compared with non – overweight people are may be due to elevated systemic inflammation, decrease muscle strength, augmented involuntary stress, ground reaction force, additional psychological problems and larger number of impairments associated with kinesophobia (4).

Symptoms are sudden onset of pain in neck, shoulder & arm. Weakness & numbness in shoulder arm & hand. Fatigue, malaise, head ache, muscle aches & pains. Because of present day life style, food, habits, excessive stress strain and anxiety more people are getting these problems and the incidence of the disease. Vishwachi is drastically increased day by day. Hence the study has been initiated to evaluate the successive management of Vishwachi.

Nidana:

There are no separate nidanas described for Vishwachi. The general nidana of vatavyadhi and factors causing vataprokopa are applicable.

Aharaja Hetus:

Gunas:

Excessive intake of ruksha, laghu, shita ahara increases the vata all these three factors which get increased by excessive intake rukshaguna causes dhatu kshaya

Rasa:

Kashaya , katu tikta rasas are vataprokap.

Sevanavidhi:

Decreased quantity of food, food taken in irregular fashion, eating incompatible foods. Affects agni and malnourishment of the dhatus kshaya this leads to vataprakopa.

Viharajahetus:

1. Primary one is ativayama which also includes.

   a. Langhana   b. Plavana   c. Dhavana   d. Utkshepa
Dukhasayya and asana are specially described by Charaka improper posture gives & more pressure over the spine and disturbs the muscular integrity provoking vata which also includes Diwaspnapna, Ratri Jagarana, Veganirodha, Ativyavaya.

Mansikahetus:

Chinta, shoka, bhaya, krodha are due to rajas gunas where as vata is also rajogunapradhana.

Thus all these aggravate vata.

Samprapti (Aetiopathogenesis)

Due to the naidanika factors, vataprapkopa occurs and it moves all over the body and where it comes in contact with snehadirahitarikta srotas it fills them up producing either Sarvanga or Ekangavyadhi.

In Vishwachi disease the prakupitavata while moving all over the body settles in the greeva making in the adhisthana. As the kha vaigunya is in greeva.

Vata fills those srotases doing soshana of the sleshakasleshma of grivakaserukasandhies & causing grivakaserukavikara. This inturn leads to dushti of kandara of bahus manifesting the symptom of vishwachi.

Samprapti Ghatakas:

- **Dosha**: Vata, Vyanavata.
- **Dushya**: Kandara of baahu & prista
- **Srotas**: Chestavaha Srotas
- **Sroto Dusti**: Sanga
- **Adhistana**: Greeva
- **Vyakastana**: Baahu, talapratyanguli.
- **Rogamarga**: Madhyama
- **Vyadhi swabhava**: Chirakari
- **Roopa** – Clinical features

In description of vishwachi, Susruta mentioned Bahu karma kshaya as the only symptom (5).

Vagbhata quoted bahu chestapaharana as the lakshana. (6). Where Madhavakara also described bahu karma kshaya (motor –function ) as the only symptom.(7). While commenting on the verses of Acharyas, various commentators have described in the following way. Dalhana opines that, this disease resembles Gridhrasi affects one arm (8). Other commentators like Gayadas, Vijayarakshita and Arunadatta stressed the point of occurrence of pain as the cardinal feature in this disease.

The clinical symptoms of Vishwachi as follows:

“Talapratyangulinamthukandara bahu prustatah
Bahvah karma kshayakariviswachi hi sasmruthah” (9)

The word Vishwachi is derived from two words. visvat + anc vishwa
means entire whole all pervading. *anc* means turned to directed towards, to move, wander about. Thus *Vishwachi* literally means spread throughout *Vishwachi* "*ViswamanchatiiitivishwachViswam*” Universal, Everywhere, Life, *Ani* (root verb) to bend, to curve, incline to honour. *Vishwachi* -name of a apsaras.

*Vishwachi* can be explained as disease starting from posterior part of hand and prakoshtha, hands, and fingers, manifest due to flexion and extension of the nerves which gives strength for the movements.

To explain hand is divided into two parts anterior and posterior. Two types of muscles are there flexor group of muscle and extensor group of muscle except for this muscles which helps in supination, pronation, aduction abduction. Motor supply to these nerves is done by radial and ulnar nerve.

Any kind of swelling (Radial neuritis or paralysis) and trauma to the nerve hampers flexion and extension of nerve and upper limb gets contracts. Supply to extension muscle is through ulnar nerves any type of trauma to the nerve affects extension ability of hand and hand remain in extension position.

There are 3 types of *Vishwachi*
1. Radial Neuritis
2. Ulnar neuritis
3. Radial ulnar neuritis or Radioulnar paralysis.

*Sushruta* said *Bahyao* which means it can be seen in one hand like *Gridhrasi* or can be seen in both the Hands (10). “*Vishwachi cheti*” *Chakar* indicates *Gridhrasi* and *Vishwachi* known as *Khalli* because in both the diseases there is stiffness in hands.

"*Vishwachi gridhrasi chokta khalli tivrasajjanvita*” said *Gayadasa*. “*Khalli tu padajangheporukamulavamotani*” *khalli* can be read separately than *Gridhrasi*.

Severe pain and *Gridhari* with stiffness or *vishwachi* is known as *Khalli*. *Harita* considered both as *khalli* (11).

Pain often has a neuritis quality – described as throbbing, burning, stabbing, electric shock like and aching. Sometimes it is cramping paraesthesia often felt in fingers. These descriptions of pain are available in our classics as *vyaddhabhedana* etc weakness and occasional tenderness occurs. The *pratyatmika lakshana* of *vishwachi* is radiating pain from the *bahu*, *pristha* to the *hastatalam* and *pratyanguli* (12).

*Teevraruja Dalhana* (13) *Stambha, Ruk, Todha & Spandana* *Vishwachi* should be differentiated with the following conditions which affects the upper limb.
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. Pain and stiffness of the affected upper limb are the associated features. The main differentiating factors of ekangavata from other conditions are impairment of voluntary activities. Whereas in Apabahuka, symptoms like difficulty in movement and pain occurs only in the amsapradesha (14).

Amsashosha:

This being mentioned as a separate entity by Madhavakara, it should be differentiated from Apabahuka. It can be differentiated by the presence of mamsakṣhaya (depletion of fatty tissue) or shoṣha in amsapradesha (muscular atrophy around shoulder). Pain is not the diagnostic criteria in anishasosa but mandatory in Apabahuka and Vishwachi (15).

Manyasthambam:

Due to diwaswap, continue uses of Highted pillow, above reasons vitiated vata get avrutta with kapha and developed Manyastambha (16), (17)

Apabahukam:

“Amsamoolasthithovayusirasa mkochyathathragahBahupraspandithahara mjanayethyapavahukam” (18). Vata prakopa take place at the site of amsapradesha and creates the sankoch at the nerve and develops the Apabahuka (19), (20).

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. 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 amsapradesha.

Modern View of Cervical radiculopathy

Cervical radiculopathy is a neurologic condition characterized by dysfunction of a cervical spinal nerve, the roots of the nerve, or both. It usually presents with pain in the neck and one arm, with a combination of sensory loss, loss of motor function, or reflex changes in the affected nerve-root distribution (21). It is associated with movement impairment of the upper limbs in 68% of the cases, scapular pain in 52.5% of cases, paresthesia in 45.5% of the cases, chest pain in 17.8% of the cases and headache in 9.7% of the cases, among others. It’s also associated with diminish Musculoskeletal reflexes. The most common cause of CR is the result of degenerative changes that affect the anatomy of the cervical spine including the vertebral bodies, the
intervertebral discs, the facet joints and the ligament component of the cervical spine (22).

**Examination for Vishwachi.**

**Examination of Neck:**

1. First active movements are assessed,
2. Next passive movements starting with extension.

**Special Test for Assessment** –

1. Spurling Test -
2. Cervical Distraction Test
3. Shoulder Abduction test
4. Neck disability Index

**Functional assessments:**

It is done by performing a series of functional tests or movements. Determine the functional capacity keeping in mind the patients age and health.

**Investigations:**

- Blood tests – CBC, ESR, RBS
  - Serum proteins CRP( C – reactive proteins )
- X-rays - Cervical Spine Ap view, Lateral view
- Imaging– MRI – Excellent for cord, root lesions.
- CT – with contrast, intra thecal for root, cord lesions.
- CT – for bony lesions.

Electro diagnostic: Nerve conduction study is an important test used to test the functioning of nerves, especially the ability of conduction of electrical stimulus. NCV studies can acknowledge the degree of demyelination and axonal loss in the segments of nerve examined. Demyelination of a nerve results in prolongation of conduction time, whereas axonal loss generally leads to the loss of nerve fiber (23).

Isotope scans: Bone (metastases), Infective lesions.

CSF - Presence of lesions infection / inflammation.

**Chikitsa**

**Line of Treatment of Vishwachi**

In Vishwachi, khanja, pangu, padadaha, and padaharsha, kroshtukasheersha,vatakantaka the cutting of vein (siravedha)draining of the affected area is advised and vatavyadhichikitsa is also recommended (24).

**Dashamuladi kashaya**-

It is used along with taila or ghruta after food then after administerd Nasya (25).

**Dwitiyam masha tailam**

It can be used in the form of Pana, Abhyanga and Basti .This oil is indicated in Pakshaghat, Arditavata, Karnashul, Badhirya, Hastakampa, Shirahkampa, Vishwachi, avabahuka, and Kalay khanja (26).

**Sapta prasth Mahamash taila**-

This oil is used in Hastakampa, Shirahkampa, Bahushoth, Avabahuka,
Badhirya, Karnashula, Karnanad, Vishwachi, and Apatanak. It can be used in the form of basti, Abhyanga, pana and nasya (27).

**Mahamasha taila-**

This oil also indicated in Pakshaghat, Hastakampa, Ardita, Apatantraka, Vishwachi, Avabahuka, Khanjavata, Hanugraha, Manyagraha, Abhimanth Vatika, Netraroga, Shukrakshya, Karnanada, Karnashula, Kalay khanja (28).

In vishwachi and Apabahuka the kashaya prepared out of dasamoola, bala, and masha mixed with oil and ghee is taken after the night meal and after the intake of this medicine nasya also has to be done (29).

**Mashadi Thailam:**

Oil prepared out of masha, saindhava, bala, rasna, dasamoola, hingu, vacha and sivajata, mixed with sunthi is taken after food is useful in bahushosha, apabahuka and severe type of vishwachi and pakshaghata(30).

**Susrutha Samhita:**

According to Susruta the diseases like Gridhrasi, Vishwachi Kroshtukasheersha, Vatakantaka, Padadaha, Padaharsha, Apabahuka, Badhirya, Dhamaneeghathavata, venesection (cutting of the vein) is the main treatment and vatavyathichikitsa also has to be done according to the condition (31). Research regarding the venesection (siravedha) should be done and result should be recorded.

**Siravedha:**

The venesection (siravedha) should be done 4 angula either above or below of the knee joint in Gridhrasi and Vishwachi. In Astangasangraha the same line of treatment is also explained (32).

**Ayurvedic classics explain the chikitsa of vishwachi as follows.**

**Charaka** advised Nasyam for diseases affecting bahu and siras along with uttarabakti snehapana. (33).

**Sushruta** advised Siravyadhana in the affected parts along with vatavyadhi samanyachikitsa and also mentioned Vamana and Nasya in diseases (34).

**Sharangadhara** advised gunjadhilepam external application (35).

From the above all statements line of treatment of vishwachi can be evolved as

Abhyanga – relax the muscles and nourish the nerve.

Sweda- reduces inflammation of the muscles and increases blood circulation in the neck region.

Snehapana – for nerve nourishment

Nasya karma – It is best for urdhvajatrugata roga.
**Kati Basti** - This penetrates to pro
nourishment to the tendons and ligaments. This leads to releasing of tight, stiff and inflamed muscles.

*Shamanoushadhi* - for shaman action and *Nidanaparivarjana* – avoid the causative factors.

**Physiotherapy**

Physiotherapy aims at improving pain, numbness and weakness that suffers on account of the condition. A physiotherapist can teach exercises that will lessen the pain. Postural physiotherapists mainly focus on stretching and flexibility exercises to ease the symptoms of cervical radiculopathy, keeping in mind needs. Training is an important treatment aspect in physiotherapy. Improving the strength of neck and back, and increasing the flexibility of the hand may help the patient to hold a better posture, thus becoming more resistant to pain. Primarily, the goal of physiotherapy is to train the individual in exercises that will ameliorate the symptoms of the condition.

1. Cervical Traction (36)
2. TENS – Pain reduced due to analgesic effect (37)
3. Neck exercises (38)
4. Core muscle strengthening exercises (39)
5. Superficial heating pads
6. Deep cervical flexor strengthening exercises (40)
7. Ice and Heat therapy- (41)

All physiotherapy techniques can be reducing pain and inflammation.

Ayurveda being an ancient medical science is formulated on scientific parameters available in those times. Research is the only way available to re-establish old facts through modern methodology. It is not only useful to expand the area of knowledge but can also help to develop and advance in new direction.

**Conclusion** –

*Vishwachi* is a pain predominant disease. Pain in *vishwachi* is caused by partial damage of nerve membranes which become sensitive to mechanical and chemical stimuli. Such afferentiation pain may either be burning superficial (dysaesthetic) type or of stabbing character. So evolving a potent *Vedanahara Yoga* and nerve nourishing drugs are very needful in the management of *Vishwachi*.

All Ayurvedic classics included *Abyanga*, *Swedan*, *Nasya*, and *Niruha basti*, *matrabasti* in the management of *vatavyadhis*. *Bahu* having its *moolam* in *greeva* gets affected in *vishwachi*. Thus *Nasya, Abyanga, Swedana, Nasya and Niruha, Matrabasti* becomes the line of treatment.
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