WORLD JOURNAL OF PHARMACEUTICAL RESEARCH
SJIF Impact Factor 7.523
Volume 6, Issue 2, 394-399. Review Article ISSN 2277– 7105

A CLINICO-ANATOMICAL CONSIDERATION OF PAKSHAGHATAM (PARALYTIC AFFLICTIONS)

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Article Received on
05 Dec. 2016,

Revised on 26 Dec. 2016,
Accepted on 17 January 2017

DOI: 10.20959/wjpr20172-7790

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ABSTRACT

Paralysis or palsy means loss of muscular power due to interference with the nervous system. Paralysis is classified according to whether it depends on the disease of the brain, spinal cord, or nerves: hence the terms-cerebral, spinal and peripheral paralysis. When muscular power is weakened as the result of some affection of the nervous system, the term applied is paralysis. Various technical names are given to various forms of the disease. **Hemiplegia** is applied to paralysis affecting one part of the face, along with the corresponding arm and leg. **Diplegia** means a condition of more or less total paralysis. **Monoplegia** is the paralysis of a single limb; and **paraplegia** signifies paralysis of both sides of the body below a given level, usually from about the level of the waist. **Creeping paralysis** is a vague term applied most often to locomotor ataxia; **shaking paralysis** is the popular name for paralysis agitans; and **wasting paralysis** commonly means progressive muscular atrophy.

KEYWORDS: Paralysis, Hemiplegia, Diplegia, Monoplegia, Paraplegia, Creeping paralysis.

CLINICO-ANATOMICAL CONSIDERATION

The discription of paralytic afflications in terms of Ayurveda is described in different Samhita Grantha. The pathogenesis is the subject of experimentation and observation. How vitiated vata playing its role in reference to Va Gatigandhanayoh Gati (movement) and Gandhan (Karma) and participating "Avarana Kalpana" in Neurological deficit. The description of contralaterl hemiplegia is also available in Ayurvedic Texts or not.

Acharya Charak has described Pakshaghat in the following couplet as follows
Hatvaekam Marutam Paksham Dakshinam Vaamev Va (C.Chi 28/53)**.**

Here the Paksha term is used for half of the body either it is right side or left side. Acharya Madhavkar states upper part and lower part of body can be involved such condition is known as Narsinghvata/Narsinghkara which may be a synonym of vitiation of vata producing paraplagia.

Vagabhatt is of the view that Ekangaroga is Pakshaghat but not like monoplagia. He further states its name as Pakshavadham in the following couplet as follows
Ekang Roga Tam Kechidanye Pakshavadham Vidu **(A.H.Ni. 15/40).**

Acharya Sushrut has described Ardita (facial paralysis) in which half part of the face is involved whereas names it as Ardita and Vagbhata Ekayam. The description of Charak and Vagbhata is very similar to ipsilateral hemiplegia. In this condition vitiated vata produces neurological deficit over face as well as in right or left part of the body (A.H.Ni.15/36, Ch.Chi. 28/32). **But there is no any description of contra lateral hemiplegia.**

Acharya Madha**v**kar mentioned Ardhangaghata, where as, charak and sushrut describe it as Pakshaghata in the following way.
Hanti Paksham Tamahurhi Pakshaghatam Bhishagvara **(Su. Ni 1/61).**

Madhava is of the view that Ardhanarishwarakara figure is very much similar to the clinical picture of hemiplegia as for as right and left side of neurological deficit is involved.

Acharya Charaka has described Ekanga Roga as an unilateral neurological deficit (monoplagia) as follows
Kuryachesta Niviritti Hi Rujam Vaakstambhamev Cha **(C. Chi. 28/55).**

That means vitiated vata obstructed and causes contracture in one of the feet or hand associated with piercing pain and distress and produces Ekangaroga.

Acharya Madhavkar has named hemiplegia as Narsinghvata/Narsinghkara and Adhrangaghata. Here Acharya would like to highlight about clinical manifestation, shape and site of lesions of different body parts by using simile of Narsingh Bhagwan and Adhrangaghat as paraplagia.

Acharya Vaghbhat in Nidan 15/40 has followed the version of Charak (C.Ch. 28/15) in reference to Sarvangroga. He further state that every body part which is paralysed during the manifestation of neurologial deficit as quadriplagia/complete paralysis/diaplagia where maximum grade of paralysis is present.

SAMPRAPTI (Aetiopathology)

Acharya Charak has described signs and symptomatology of snayugat dusta vata in the following couplet (C.Chi.28/35).

Vahyabhayantamayaamam khalimam kubjatvamev cha|.
Sarvakayaroganshaya Kuryata Snayuagatoanilah|| **(C.Chi.28/35).**

General signs and symptomatology and vitiated vata realted to snayudustagata Vata is briefly describe in C.Su. 12.

The signs and symptoms are related with the normal function of vata in vatakalakaliya adhayay as vayastu yantra tantradhara (C. Su. 12) where, yantra stands for neuroanatomy involved and tantra stands for neurophysiology producing neurological deficit.

Let us discuss status of Dosha, Dushya Srotodusti, Srotos involvement, Vyadhi and symptoms of Pakshaghat, one by one.

1. Dosha: 'Vata'

Vata dosha is responsible for movement and stimulation (Va Gatigandhanayoh) in cases of pakshaghat where vyana vayu (Vyanh Sarvashariragah) while circulation in the blood, produces vitiation the arteries and veins produces embolism and haemorrhage (Stroke) due to doshabighat or Vahaya Abhighata (Traumatic injury). Thromboembolic phenomenon is being produced due to pathogenesis of Pakshaghata afterward due to Kshaya and Vriddhi of Vata Dosha, UMN and LMN lesions produces and ultimately involves all five vayu.

Apana vayu

If injury or any pathology develops in epiconus / conus part [Swadhisthan Chakra].

Udana Vayu aphasia

Any lesion/neurological deficit in central cortex (Broca's area or the involvement of bilateral laryngeal nerve).

So tha t Charaka and Sarangdhara is of the view that pakshaghat is an Nanatmaj Vyadhi (Purely vatic) (C.Chi.20).

Acharya Charak & Madhav is of the view that "avarana" of the pitta and kapha on vata producing a pioneer role in the manifestations and process of pathogenesis of pakshaghat afterward the disesase pakshaghat. Afterwards become chronic (>3 months) then converts into Tridoshaja (Both Pitta and Kapha involved) vyadhi due to avarana kalpna (Madhavakar).

Acharaya charak has described management of avarana kalpna in (C.Chi.28/184-192) as well as yogratnakar/vata vyadhi chikitsa/pg.515).

2. Dushya: The vitiation of Rasa Rakta, Mansa and Meda Dhatu are mainly present the updhatu like snayu and sira is also vitiated.

Raktagat Vyan vata is vitiated to Mansa dhatu produces neuromuscular disease due to demyelination where vata dosha obstruction is associated with disturbance in energy flow and conduction block leads to muscular weekness due to neurological deficit, but there is no Mansa vriddhi (hypertrophy) or Mansa Kshaya (atrophy / hypotrophy) is present only with muscular weakness and fatiguebility so there is onlyparesis.

The second involvement of Mansa Dhatu is myopathies. Myopathies are deprived of motor nerve supply producing degenerative changes atrophy leads to mansa Vriddhi and Mansa Kshaya. In short Dhatu is directly involved there is hypertrophy or hypotrophy of the dhatu and its dysfunction shall be caused due to this reason where as Updhatu envolvement effects the dhatu without causing hypotrophy are hypertrophy so the dysfunction due to updhatu involvement.

3. Srotodushti: The obstructed vata constricts the rakta vaha and manovaha srotas and produces **"sang".** The obstructed vata (Avarit vata) circulating blood reaches the other part of the body producing pathogenesis with the help of **"Avarnakalpana"** and **"Khavaigunya".** The entire process of the pathogenesis starts from **Kshadkriyakala** and ultimately diseased pakshaghata is produce.

4. Srotus involvement: Manovahi srotas, rasa vahi srotas, rakta vahi srotas, mansa vahi srotas are mainly involved due to sang. But not only this obstructed pathology can involve

every srotas, because obstruction produces vimargaman which can involve any tissue, organ and system of human body.

5. Vyadhi: The main seat of Vata is pakvashaya (C.Su.20/8) because apana vayu is present over there to perform every function of pelvic region. Vyan vayu while circulating blood in the pelvic region with the help of apana vayu and venous return also the under influence of apana vayu if any vitiation of apana vayu in the pelvic region stands it will disturb the proper the function of vyan vayu and vitiation of apan vata as well as vayan vata together produces clinical manifestation of pakshaghat this was ideal gland about the seat of pakshghat in pakvashaya. So it is a pakvashayokat vayadhi.

6. Signs of symptomatology: Acharya Charak has described symptomatology as follows: Paadam Sankochayatekam Hastam Va Todashalakrita| **(C.Chi.28/55).**

Here **chesta nivratii** means loss of movements or motor loss due to the trauma of a particular of marma of pristha like Kukundara and nitamba marma rujam.

Rujam means pain may be neuropathic and phantom limb pain (Sensory loss) or Central pain syndrome motor loss. Some times polyneuropathy and tingling pain is present.

Vaka Stambha this means unable to speaking aphasia.

Acharya sushrut Sandhivandhan vimokshayane **(Su.Ni. 1/61)** Flaccid paralysis.

Dharamakarmanyamchet **(Su.Ni.1/16,Vap.Ni.15/39)** loss of motor and sensory function.

Patatayasan vaapi **(Su.Ni.1/62)** means fall down on bed where lesion present in cerebellum.

Vagbhata/Charak Sirasanayuvishoshyasch **(Vag.Ni 15/38)** Spastic paralysis.

CONCLUSION

1.Role of trauma society score and daily living activity for managing a case of pakshaghat and have to evaluate force of intensity of trauma in case of pakshaghat.Trauma severity score can be measure by:

- EMV Scale which is similar to the version of Charak (C.Chi.28/55)
- Glassgow Coma Scale.
- ADL activities: Activites of daily living daily routine work.

2."Pakshaghate Virechenam" while it is purely a vatik disease.

In case of Pakshaghat there is absolute constipation (due to diminished peristalsis movements) and for shaman of vata, basti is the Drug of choice. In both the cases and to decrease intracranial pressure there is a indication of virechana karma (dehydrate therapy).

3. While describing urdhavajatrugatamarma and its its effect by Acharya Sushrut, why there is no description of Neurological deficit (Hemiplegia).

Most of the urdhavajatrugatamarma are sadhyapranaharanamarma. They have been described with lakshan of sadhyapranaharanamarma (Ashuharmarma).

4. We can say that UMN lesion is there by vatavriddhi and in LMN lesion there is vatakshaya. In UMN there is increase in muscle tone as well as deep reflexes but there is functional loss so there is deterioration of the karma of vata. So we can say vatakshaya takes place inspite of vatavriddhi in case of UML lesion. But we can say that there is vatavriddhi in case of abnormal involuntary movement (hyperkinesias). Chiefly affecting extra pyramidal system. (e.g.: Tremors, Dystonias, Huntington disease).

5. Manovahi srotas is responsible for the similar function of limbic system. Mood, memory and behavioural changes occurs in neurological deficit of limbic system, which is also mentioned in Ayurvedic Text as Smriti Bransha (loss of memory) in case of samprapti of apasmara.

6. Pakshaghat in case of Kaumarya Bhritya references Shaishviya Angaghata or Balapakshaghat (Polomyelitis) and as a symptom of Skandgraha Roga (Hataikapaksha/infantile hemiplagia).

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