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DYSTONIA - AN AYURVEDIC APPROACH

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Abstract

Dystonia is one of the neurologic movement disorders characterized by uncontrollable muscle movements ranging from mild to severe. It can affect one or multiple parts of the body. Many affected patients also experience painful muscle spasms and cramps. These involuntary contractions may cause twisting, repetitive movements and abnormal postures. These affects the patient's overall quality of life and his ability to do daily activities. The exact cause of dystonia still remains unknown, but is believed to be a combination of genetic as well as environmental factors.

Key words – Dystonia, movement disorder

Inroduction

Wholesome body movements forms an integral aspect of daily life.Dystonia is one of the most challenging movement disorders,characterized by unintentional muscular contractions or spasms,of any part /parts of the body that eventually leads to some repetitive motions or awkward postures,which can be painful too.It is a considerably agonizing disorder that can afflict any age group from infancy to adulthood.

Epidemiology

Dystonia is considered as the third most prevalent variety of movement disorders.In India,the incidence in people less than 30 years of age is 7.7 per 1,00,000 and in age group between 50 and 70 years was 177.9 per 1,00,000. Worldwide prevalence of dystonia is estimated as16.4/100000.

Etiology and classification

The etiology of dystonia is regarded as quite varied and thus a combination of factors related to genetics,brain injury,exposure to drugs,psychological makeup of the patient needs to be considered.

Classification based on etiology includes:

Primary dystonia affecting young people primarily due to genetic susceptibility.

Secondary dystonia occurring due to metabolic disorders like Wilson's disease, brain tumor, blood disorders, side effects of drugs etc.

Classification based on the affected body part includes:

- Generalised dystonia: most or all of the body is affected
- Hemidystonia: affecting ipsilateral upper and lower limb
- Segmental dystonia: two or more adjacent parts of the body is affected
- Multifocal dystonia: two or more unrelated body parts are affected
- Focal dystonia: localized to a specific body part

Example: Blepharospasm,cervical dystonia,oromandibular dystonia, writer's cramp

According to some researchers, there are more than 100 types of such dystonias and hence, the exact diagnosis and classification of it are quite challenging.

Diagnosis

In the absence of a definitive test, its diagnosis mainly relies upon a proper medical history, hereditary factors and physical examination. To determine any underlying conditions, the following tests may be suggested;

- Blood and urine examination to rule out the presence of any toxins or infections
- MRI or CT scans to rule out tumor, brain lesions
- Levodopa treatment to check if symptoms improve
- Genetic testing to determine the inherited conditions
- EMG measures electrical activity within the muscles

Management

The main aim of treatment in ineradicable disorders like dystonia is to improve the Quality of Life of the patients. The main management modalities include:

- Oral medications like Anticholinergics, Benzodiazepines, Levodopa, VMAT2 inhibitors
- Neurosurgical procedures like Deep Brain stimulation
- Botulinum toxin injections
- Counselling and education
- Occupational and physical therapy

Dystonia is a highly stigmatizing and socially disabling neurological condition. The drug therapy has been found to be effective in only about 30% to 40% of patients and that too not completely. The side effects on long term use of these medications remains a cause of concern, especially in younger age group patients.

AYURVEDIC APPROACH TO DYSTONIA

The *Tridosas* in equipoise, constitutes the fundamental elements of health according to Ayurveda. They also become the inevitable contributive factors of disease upon vitiation. *Vata* is considered as the chief among *Tridosas*, as *Pitta, Kapha, dhatus* and *malas* depend upon it for their activities.The term *Vata* means 'that which has *gati* or movement. Thus, *Vata* dosa is entitled as *Prabhu*(supreme one) and '*tantrayantradhara'* (having potential to control others) in classical texts.

Concepts of dystonia in Ayurvedic literature

- Astanga Hrdaya mentions *Ruk*, *Kampa ,Sankocha, Spandana* as symptoms in *Vata prakopa* and *Sarvanga vata*
- Charaka Samhita includes *Akshepaka, Vepathu, , Vatahata, Hanusthamba, Manyasthamba, Dhanurvata, Sarvanga vata* among 80 *Vata nanatmaja vikara*
- Madhava Nidana includes *Sarvanga Kampavata* and *Ekanga Kampavata* as two types of *Kampavata*
- Yogaratnakara explains *Sarvanga kampa* and *Shiro Kampa* under *Vepathu* in *Vatavyadhi*
- Bhaisajya Ratnavali has chapters named *Tandava Rogadhikara* and *Vepathu Rogadhikara* bearing lot of similarities with features of dystonia.

The instinctive muscle contractions and abnormal postures of dystonia may be understood as aggravation of *cala guna of Vata.*The site of vitiation is especially in the *Mamsa, meda, majja dhatu along with snayu.*

In addition, non-motor symptoms of dystonia like pain(*ruk*), fatigue*(deenata*), sleeplessness(*nidranasa*), depression(*chinta*) are also distinctive features of vitiated Vata. Hence, in Ayurveda, features of dystonia has close resemblance with concepts of ***Vatavyadhi***.

Nidana and Samprapthi – Causes and Pathogenesis

Ativyayama (Excessive physical activities), *Atichintanam* (overthinking and other psychic factors), *Abhigata* (trauma), *Uchairbhashanam* (*excessive* loud speech) and *Visha* (Neurotoxins, inclusion of iatrogenic drugs) are some of the causative factors for vitiation of Vata. They cause *Vata* to dislodge into various channels in the body, manifesting *Vatavyadhi*, pertaining to either one or many parts of the body.

In the modern guidelines as well, several research evidences suggest mood, anxiety, stress, brain injury, toxins and excessive activities contribute to be trigger factors or modulate the severity of existing dystonia.

Sadhya -Asadhyata – Prognosis

Vata vyadhis are considered as *Mahagada,* and thus it is regarded as incurable disorder.

Chikitsa

The general treatment principles followed are:

- *Vata hara chikitsa*
- *Akshepaka, and Kampavata chikitsa*
- *Rasayana chikitsa*

1. ***Sodhana Chikitsa (*Purificatory therapy)** : The *poorvakarma* includes *Snehana* and *Swedana*

Snehana -*Tailas* are usually preferred both for *abhyantara snehana*(internal) and *Bahya snehana* (external)

- **Abhyantara snehana :** Sahacharadi avarthi, Kshirabala taila, Pinyaka taila
- **Bahya snehana :**

Procedures : *Abhyanga (full body massage), gandoosha (oil pulling), Akshitarpana(an ayurvedic treatment for eyes), nasya, parisheka(pouring over), moordhnitaila, Karnapoorana etc*

Tailas preferred: Sahacharadi taila, Dhanwantaram taila, Masa taila, Bala Ashwagandha laskshadi taila, Prabhanjana taila, Kshirabala taila

Swedana - *Nadi,Parisheka,Avagahana,Sarvanga / Ekanga, pinda sweda* using vatahara drugs.

Later Virechana(purgation), samsarjana karma , followed by Basthi (enema therapy) like Raja yapana Vasthi, Kshira vasti, Madhutailika vasti, or yoga basthi .

2. **Samana Chikitsa (Pacificatory therapy)-** Inclusion of formulations with drugs possessing *Vatanulomana, balya, rasayana* qualities .

Examples: Badradarvadi , Astavargam, Danadanayanadi,Purnachandrodaya rasa, Chaturbhuja rasa, Sarvangakampari rasa, Rajatha Bhasma.

Single drugs:

a. Aswagandha (Withania somnifera) – Anxiolytic, neuroregenerative
b. Bala (Sida Cordifolia) – anti stress,adaptogenic
c. Paraseeka yavani (Hyoscyamus Niger)-antispasmodic,analgesic,anti-inflammatory,sedative
d. Kapikachu (Mucuna pruriens)-reduces tremors,effective in neurodegenerative disorders
e. Guggulu (Commifora wightii)-anti-inflammatory,anti-spasmodic,anti-oxidant

3. **Rasayana (rejuvenation therapy)**

Rasayana therapy can play a pivotal role in the management of a long-standing enervating disorder like dystonia, with no known complete cure.

Example-*Lasuna rasayana,Brahma rasayana,Medhya rasayana*

- **Yoga and Meditation:** Mood, Anxiety disorders, other psychiatric symptoms occur at an increased rate in patients with dystonia. Several studies suggested inclusion of yoga and meditation as an adjunctive therapy, might ease the stress factors along with improving muscle strength, and balance.It is one of the best recommended methods for enhancement of quality of life in dystonic patients.
Special modified yoga poses tailored according to capability of patient is preferred in patients with dystonia.

- **Dietary regulations:** Pathya or the preferred dietary regimen involves including Sastikasali, kulatha(horsegram), draksha(grapes), warm water ,amalaka(goose berry), mamsa varga like kukkuda (chicken).
Apathya includes dahi(curd), masha(blackgram), viruda ahara(incompatible diet), untimely food intake.

- **Research recommendations in the field of Dystonia** :

Researchers strongly recommends adopting a holistic rehabilitation technique through multi-disciplinary approach for tackling the motor and non-motor symptoms of dystonia, to improve the Quality of life of patients.

Dystonia Medical Research Foundation also stated that a complementary and Integrative approach would be the best in dystonia rehabilitation, at the Dystonia Family Symposium conducted at Chicago in 2016.

A multi-faceted approach like psychological support (to improve stress,anxiety), pain management (heat therapy, massage, relaxation techniques), sleep management, chiropractic care (focusing on spinal alignment, exercises) is already been followed at various wellness centers worldwide.

Yogatonia – A new concept of modified yoga for benefit of people with dystonia was recommended by Dystonia Medical Research Foundation Canada, in 2012.

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