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Review Article

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IMPORTANCE OF PANCHAKARMA IN LEARNING DISABILITIES

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ABSTRACT

Learning disabilities are a group of neurodevelopment disorders that can significantly hamper a person's ability to <u>learn</u> new things. It results in person may have trouble with tasks such as speaking, reading, writing, paying attention, understanding information, remembering things, performing mathematical calculations, or coordinating movements. It has a prevalence rate ranging from 3-10 % among students of India. Maternal illness during pregnancy, Birth complications that block the flow of oxygen to the baby's brain, Certain genes that can make the person more genetically predisposed to developing a learning disabilities, Injury, illness such as meningitis in early childhood, cerebral palsy and Down's syndrome often involve some extent of learning disability. At present in modern science no effective treatment has been formulated which can be saw as complete

cure to these disorders. Treatment option which is available is only physiotherapy and supportive medications. Various Panchakarma procedures like Udwartana, Sarvaanga abhvanga, Shastikshali pinda sweda, Shirodhara, Pratimarsha nasya and Basti can be beneficial in the management of neuromotor disorders in children. There is a need of proper understanding about panchakarma. This study is aimed on discussion about use of panchakarma procedure in children with learning disabilities.

KEYWORD: Learning disability, panchakarma, Ayurveda.

INTRODUCTION

Learning disability (LD) is a general term that describes specific kinds of learning problems. A learning disability can cause a person to have trouble learning and using certain skills. The skills most often affected are reading, writing, listening, speaking, reasoning, and doing math. Learning disabilities vary from person to person. One person with LD may not have the same

kind of learning problems as another person with LD. One person may have trouble with reading and writing.

Another person with LD may have problems understanding math. Still another person may have trouble in each of these areas, as well as with understanding what people are saying (National Dissemination Centre for Children and Youth with Disabilities.^[1]

A learning disability is a neurological disorder that affects the brain's ability to receive, process, store, and respond to information. The term learning disability is used to describe the seemingly unexplained difficulty a person of at least average intelligence has in acquiring basic academic skills. These skills are essential for success at school and work, and for coping with life in general. "LD" does not stand for a single disorder. It is a term that refers to a group of disorders. Interestingly, there is no clear and widely accepted definition of learning disabilities. Reading disability (dyslexia) The most common learning disability, affecting at least 80% of children with learning disabilities. It's caused by a deficit in phonologic processing, which involves reading decoding, phonics, and auditory capabilities. Dyscalculia A weakness in performing arithmetic operations, such as organising problems, finishing multi-step calculations, and distinguishing mathematical signs. Dysgraphia A condition that causes distorted writing, even with proper instruction and motor ability. Children with dysgraphia may have inconsistent and illegible handwriting.

Etiology

Learning disabilities are caused by something affecting the growth of the brain. This may occur in prenatally stage, during birth, or in early childhood.

Possible causes include the following

- An inherited condition, meaning that certain genes delivered from the parents affected the brain development.
- Chromosome abnormalities such as Down's syndrome or Turner syndrome.
- Complications through birth resulting in a lack of oxygen to the brain. A very premature birth.
- Mother's illness during pregnancy.
- The mother taking alcohol during pregnancy, for example Fetal Alcohol Syndrome.
- First degree relatives with learning disability, prenatal cigarette exposure, lead exposure are risk factors

- A dyslexic parent may pass on the disorder up to half of the children.
- Half of the siblings of a dyslexic child are likely to suffer from dyslexia.
- Association with attention deficit hyperactivity disorder (ADHD) is well known, the two
 conditions co-existing in around one-third of cases.
- Contact with damaging material (like radiation).
- Neglect, and/or a lack of mental stimulation early in life.
- Some people with learning disability have additional physical disability and/or sensory weakening.

Ayurvedic perspective

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न हि सर्वविकाराणांनामतोअस्ति धुवास्थिति : ।।
स एवक्पितोदोषः समृत्थानविशेषतः स्थानान्तरगतश्चैवजनयत्यामयान् ।। (चस्.18/44-45)
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According to Acharya Charaka, it is not possible to name every disease. The same
Tridoshas after getting exposed to different causative factors (Nidanas), produces different
types of diseases (Rogas) at different places (Sthanas). Keeping this in consideration,
there is no direct description of learning disorders in classical texts.

Ayurveda describe three aspects of mental ability

- Dhi (The power of acquirement or learning),
- Dhriti (The power of holding), and
- Smriti (The ability to memorize, recollection of past experiences).
- Dhi and Smriti work in association with the Dhriti and leads to normal process of Gyanotpatti. When the three mental functions are not in balance, either individually or in their coordination with one another mentioned as the state of (Vibhransha) in our texts, then learning problems can emerge.

Samprapti (Etiopathogenesis)

Keeping in mind the Manovyaparyaya and Gyanotpatti karma probable mode of origin of the disease can be postulated.

Samprapti ghataka

• Dosha - Sharirika

Vata – Prana, Udana, Vyana

Pitta – Buddhi vaisheshika Alochaka Sadhaka Kapha – Tarpaka

- Manasika Rajas and Tamas
- Dushya- Rasa, Majja
- Srotas ManovahaSrotas
- Dushti- Atipravritti
- · Agni- Vishama
- Udbhavasthana Mastishka, Hridaya
- Vyaktisthana Sarva Sharira

Diagnosis

 Discrepancy between potential (ability, IQ) and achievement, resulting in underachievement, especially in reading, is the most important clue. Unexpected difficulties in reading should arouse suspicion.

Prevalence

Physical examination- It should exclude any neurological deficit, hearing and visual loss.

 Investigations- These include screening for hearing, vision, speech and psychoeducational status.

DSM-5 Diagnostic criteria for LD

- Persistent difficulty in learning academic skills for at least 6 months with at least one of the symptoms despite intervention targeting the areas of difficulty. These areas of difficulty include:
- Inaccurate or slow and effortful word reading
- Difficulty understanding the meaning of what is read
- Spelling
- Writing difficulties such as grammar, punctuations, organization and clarity
- Number sense, fact and calculation
- Mathematical reasoning

Management of learning disabilities

Ayurveda adopts a holistic approach towards the disease management. Basically, the Chikitsa is classified into 3 types i.e. Daivavyapashraya Chikitsa (Divine therapy), Yuktivyapashraya Chikitsa (Rational therapy) and Satvavajaya Chikitsa (Psychotherapy). Ayurvedic management helps in intellectual power, concentration, learning capacity and enhancing academic performance in learning disability.

Panchakarma therapy

- **Sarvanga abhyanga-**A gentle soothing massage over the body with medicated oils works on both physical and psychological levels.
 - Physical- Rubbing the body produces heat and increases blood circulation, it affects the lymphatic system and supplies more nourishment to the blood. It also relaxes the muscles and pacifies aggravated Vata dosha.
 - Psychological-Through touch, massage works on the nervous system and affects the circulation of growth hormones.
- Shiro-dhara- Medicated oils like Jatamansi oil, Brahmi oil, Bala oil, milk and Ghritas, vata shamak decoctions can be used that directly nurtures the control station (Uttamanga) i.e head and alleviates psycho-somatic disorders balancing the doshas. Continuous pressure by dripping of fluid on the forehead produces a vibration which generates electromagnetic waves and it reaches the brain cortex producing a tranquilizing effect. There are studies that supports its efficacy in various neurodevelopmental disorders like ADHD and various Cognitive impairments.
- Shiro-basti- It involves pooling of the liquid medicines, especially herbal oils and ghritas in a chamber kept overhead that are allowed to stay there for a certain period of time. It enhances and nourishes the brain cells, alleviates insomnia, stress, tension and different kind of neurobehavioral disorders. Ghrita such as Kalyan ghrita, Goghrita and oils such as Jyotishmati oil, Brahmi oil, Tila oil are beneficial.
- Shiro-abhyanga- Shirodhara and Shirobasti followed by Shiroabhyanga reduces the levels of stress-related hormones and also triggers rapid cerebral blood flow further enhancing the efficacy of the procedure.
- Basti- Basti is known to be the ardhachikitsa (half-treatment) in Ayurveda. It's a prime
 treatment modality for pacifying vitiated vata dosha. Matrabasti is safest and most
 effective for children because of its nil complications. Dhanwantar oil and Sahcharadi oil
 matrabasti are good options.
- Nasya- Acharya Vagbhattahas said nasa is gateway of shira. This statement is strongly supported by anatomical fact that the olfactory nerve fibres run through the cribriform plate making it an excellent gateway into the brain for administering drugs. The drug administered through nostrils, reaches shringataka (a shiramarma) and spreads into the murdha (brain), netra (eye), shrota (ear), kantha (throat), siramukhas (opening of the vessels), etc. and seizes the morbid dosha from these areas and expels them from the uttamanga. After proper snehan and swedan, Brimhana nasya with Anutail, Shadbindu

- taila, Brahmi oil, Kalyan ghrita, Palankasha oil can be used that will alleviate vata and increase-memory and cognitive powers.
- **Dhupana** karma- Dhupana karma with herbs such as Jatamansi, Sarshapa (mustard), Vacha, Agaru, Palankasha can be done.

Daivavyapashraya chikitsa

• The word Daiva refers to sinful acts committed in past life. Itis a treatment based on pleasing the god. Its mode of action can't be ascertained through a general logic, but gives immediate results. It acts on the basis of Prabhava. This revives normal functioning of Satva guna and removes obstacles of Raja and Tama. Mantra (Hymns), Aushadha (Amulets, Talisman), Mani (Wearing of Gems), Mangala (Auspicious ceremony), Bali (Offering to god), Upahara (Gift), Homa (Oblations), Niyama (Observance of auspicious scriptural rules), Prayaschitta (Atonement), Upavasa (Fasting), Svastyayana (Chanting of auspicious hymns), Pranipata (Observance to the god), Gamana (Going to pilgrimage) are different means of this disciple. In manidharana karma, wearing a Rudraksha amulet can be opted.

Yuktivyapashraya chikitsa

• Itis aimed at rational use of herbal drugs and therapies. It is a treatment in which the medicine, lifestyle, and diet are skillfully planed and administered. It is divided in two types – Shodhan & Shaman. Since learning disabilities involve a neurological deficit in the functioning and coordination of brain, a great deal of nootropic drugs (medhya rasayanas) which enhance memory and cognition and boost overall brain performance are mentioned in Ayurveda that can be of great benefit.

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DISCUSSION

There are many children suffering from LDs, but most of them go undetected. They face many challenges in life.awareness about LDs is also very low in India. Early and accurate identification of learning disability in schools can help struggling students and show them a path for success.

Teachers, parents and schools aware and plan intervention and accommodations to aid the individuals in successfully becoming independent learners. Ayurvedic herbs and panchakarma procedures can really make a great difference to these children to live stable and suitable life.

CONCLUSION

Learning disabilities a group of neurodevelopmental disorder. Its prevalence rate has dramatically increased. Learning disorders varies widely in symptoms and severity, making diagnosing difficult.

There is no life of treatment for learning disorder in modern science. Ayurveda can give a holistic approach with logical pharmacotherapy and panchakarma. Various Researches conducted on this topic shows that Panchakarma especially Abhyanga, Swedan by Shastikshalipinda sweda, Nasya, Shirodhara and Basti etc can be effective in learning disorders. Requirement of Long-term interventions of Panchakarma therapies has benefited learning disabilities patients.

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