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## A REVIEW ON SCOPE OF AYURVEDA IN THE MANAGEMENT OF MENTAL RETARDATION

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### ABSTRACT

Mental retardation (*Manasika mandatva*) is developmental disorder which come to existence in embryogenesis. It is defined as condition of subnormal intellectual functioning with defective adaptogenic behavior. 5 - 10 % of children are affected by mental retardation. In *Ayurveda* number of psychological disorders are described in details but regarding mental retardation it is lacking. After summarizing scattered references on mental retardation, it is clear that genetic factors (*beejadosha*), improper diet (*apathya*), suppression of natural urges (*vegadharana*) and gynecological disorders (*yonidosha*) during pregnancy play important role in the development of fetal disorder (*garbhavikrati*) & mental disorder (*manasik mandatava*). In *Ayurveda* it occurs due to vitiation of rational thinking (*dhee*), intellect / retaining power of the mind (*dhriti*), and memory (*smriti*) that causes imbalance of kala and karma which results into improper contact of the senses with their objectives (*Asatmendriyarth samyoga*). Currently available treatment in conventional system of medicine is palliative while in *ayurveda* medhya drugs (memory boosters & enhancers) are described for such disorders which are quiet safe and side effect free. In this review paper author did an effort not to highlight aetiopathogenesis but also management of mental retardation supported by various studies in the field of *Ayurveda*.

**Key words:** *Manasika mandatva*, Mental Retardation, *Ayurveda*.

### INTRODUCTION

Mental retardation (MR) is a condition of arrested or incomplete development of the mind, which is especially characterized by impairment of skills manifested during the developmental period, which contribute to the overall level of intelligence, i.e. cognitive, language, motor, and social abilities. Before 20<sup>th</sup> century mental retardation was known as Intellectual disability (ID) or general learning disability. It was historically defined as an intelligence quotient score under 70. Once focused almost entirely on cognition, the definition now includes both a component relating to mental functioning and one relating to individual's functional skills in their environment. As a

result, a person with an unusually low IQ may not be considered intellectually disabled. Syndromic mental retardation is intellectual deficits associated with other medical and behavioral signs and symptoms. Non-syndromic mental retardation refers to intellectual deficits that appear without other abnormalities. The term mental retardation is used by the World Health Organization in the ICD-10 codes, which has a section titled "Mental Retardation" [1] (codes F70–F79).

- F70 Mild Mental Retardation
- F71 Moderate Mental Retardation
- F72 Severe Mental Retardation
- F73 Profound Mental Retardation

- F78 Other Mental Retardation
- F79 Unspecified Mental Retardation.

While in DSM IV presents 4 types of Mental Retardation reflecting the degree of intellectual impairment [2].

- Mild or Educable - IQ between 50-70
- Moderate or Trainable - IQ between 35 - 49
- Severe or Dependent - IQ between 20-34
- Profound or Life support - IQ below 20

Mental retardation affects about 2–3% of people.[3] Data obtained from National Sample Survey Organization (NSSO) under the Department of Statistics, Government of India indicate that the prevalence rate of mental retardation is about 20 per 1000 general population while the prevalence of developmental delays is about 30 per 1000 in the 14 year-old population. In rural areas, the incidence of mental retardation is 3.1% and in urban, it is 0.9%. The NIMH mentions that 2% of the general population is MR. Three quarters of them are with mild retardation and one-fourth is with severe retardation. [4]

In Ayurveda number of psychological disorders is described in details but regarding mental retardation it is lacking. After summarizing scattered references on mental retardation it is clear that genetic factors (*beejadasha*), improper diet (*apathya*), suppression of natural urges (*vegadharana*) and gynecological disorders (*yonidosha*) during pregnancy play important role in the development of fetal disorders (*garbhavikrati*) & mental disorders (*manasik madatava*)[5]. According to Indian thoughts, *mana* (mind) is one of the major operational concepts in the process of learning and the cause of *mandatava* (entanglement/attachment). *Mana* has dimension which is *anu* (beyond atom in its minutest aspect), and is capable of remaining *atindriya* (beyond sensory perception). [6]

*Mana (Psyche)* is an instrument of all our experiences. The chief functions of *Manas* are assimilation and discrimination. The strength of *Indriyas* is derived from the *Mana*. According to *Chakrapani*, the chief functions of the *Mana* are *ichcha* (desire), *dvesha* (hatred), *sukha* (pleasure), *duhkha* (pain) and *prayatna* (effort). [7]

According to *Charaka*, thinking, judgment, argument and conclusion are the objects of mind. The modern physiology also accepts these functions of mind, which is the aggregate of thinking, judgment and conclusion. It directs and controls the senses and helps to control one when one is getting away from right thinking, imagination and ideation.

#### Etiological factors (*Nidanas*):

As separate description of '*Manasik mandatva*' has not been described in any of the classics, only indirect and scattered information about the etiology of this disease can be found. These causes can be classified as – *Nija nidana* (inherited cause) and *Agantuja nidana* (Acquired cause). Out of these *Nija nidana* (inherited cause) again

may be classified as *sahaja* (genetic), *garbhaja* (congenital) and *janmottara* (post natal).

- **Sahaja nidana (Genetic factor)** *Acharya Charaka* have described *Buddhi* (intelligence), *medha* and *smriti* (memory) as the properties of *Atma*, *Satmya* and *Satva* during describing six factor responsible to formation *garbha* (fetus). Out of these six factors above mentioned three factors influence the intelligence of a person. Defect in any of these three factors may adversely affect intelligence. [8]

- **Garbhaja nidana (Congenital factor)** These include all the factors affecting the fetus during its development in the womb such as mother's diet etc. *Sushruta* says that non-fulfillment of longing of pregnant women leads to vitiation of biological factors mainly *vata dosha* that give rise to specific features responsible for mental retardation. [9]

- **Janmottara nidana (Postnatal factor)** During description of *phakka rogas* *Acharya Kasyapa* has mentioned *jadata* (mental insufficiency), *panguta* (lame) and *Mooka* (dumb) on consumption of vitiated milk by *tridoshas*. [10] He also describes that all these are features of various pediatric disorders.

#### *Agantuja Nidana (Acquired cause)*

These may be classified under three headings as follows

- **Sirobhighata (head injury):** *Sirobhighata* is usually seen during forceps delivery. Though the incidence rate has decreased due to adaptation of caesarian section but unavailability of obstetrics surgeons in small cities and towns and training of the inexperienced house surgeons, still cause a lot of trauma to the fetal skull during its delivery by applying forceps. Fall over head is another cause of *Sirobhighata*.

- **Bhutavesaja (Infections):** *Bhutavesa* or infections to the structures inside the cranium is another cause for *buddhimandya* (mental retardation). e.g. tuberculous encephalitis, meningitis etc. When the infection subsides by treatment the affected part which is damaged will cause permanent disabilities of intellectual functions.

- **Visajanya (Toxic):** Poisons taken internally will affect the brain structures and cause impaired intellectual capabilities leading to *mandabuddhitva*. It has been proved that drugs like 'barbiturates, opium' etc. impairs mental as well as intellectual states. But the impairment is comparatively less in severity.

Thus, pathogenesis of mental retardation can be described as -

The *manas* and *buddhi* are derived from *atmaja* and *satvaja* Bhava. Their qualities depend upon the deeds of the previous birth and the ratio of *satva*, *rajas* and *tamas guna* at the time of fertilization. The higher concentration of *tamasa guna* either due to previous karma or other conditions at the time of fertilization can have an impact on the normal physiology of *buddhi*, resulting into its hypo functioning and the foetus affected is born

mentally deficient. This condition may also be possible in case of abnormality of *bija*, *bijabhaga* or *bijabhaga avayava* especially the part which is responsible for buddhi.

Various etiological factors like dishonored longings of a pregnant woman, excessive consumption of *vata vardhaka ahara*, intake of alcohol, excessive sleeping by a pregnant lady vitiate the *doshas* (the *vata dosha* mainly). This provoked *Vata* either directly reaches the fetal heart through umbilical cord or may form an *avarana* (covering) which vitiates *Kapha* present in fetal heart. Thus, *Vata* along with *Kapha* obstruct the functions of entities having their seat in the heart such as *manas*, *buddhi*, *pranavayu*, *udanavayu*, *sadhaka pitta*, *alochaka pitta* (*buddhi vaishesika*) and *oja*. The hypo function of all these entities and higher concentration of *tamasa guna* can manifest into the hypo functioning of *buddhi*. During delivery, if there is any trauma especially on head (seat of *Indriya*) it may cause hypo functioning of the *buddhi*. In the postnatal period, *Kaphaj* milk feeding to a child provokes the *Kapha dosha* and this aggravated *Kapha* creates obstruction in them *manovaha srotas* in the heart which is the seat of *buddhi* and its functional units. It results into the impaired genesis of knowledge causing *mandabuddhitwa* (mental retardation) in a child.

## CLINICAL FEATURES

Failure to meet age-appropriate expectations such as delayed speech, language disabilities, and delayed motor milestones, constitutes the hallmark of clinical manifestations. Hyper activity, poor memory, poor attention, poor concentration, distractibility, emotional instability, sleep problems, impulsiveness and awkward (clumsy) movements and seizures are usually present in some combinations.

## DIAGNOSIS

The diagnosis of Mental Retardation can be made through a careful history, a standard intellectual assessment and measure of adaptive behavior, which is below the expected level. A history and psychiatric interview are useful in obtaining a longitudinal picture of the child's development and functioning, on the basis of examination of physical stigmata, neurological abnormalities and laboratory tests. Besides these, psychological assessment is very important to evaluate the psychological level and brain damage. Intelligence assessment plays a major role in the diagnosis, prognosis and therapeutics.

## MANAGEMENT

In modern medicine line of treatment include counseling, psychotherapy, play therapy, occupational therapy etc while in *Ayurveda* management is divided in to two parts:

### Preventive aspects

They can be further subdivided into –

- **Before conception** - In *Ayurveda*, the consanguineous marriage has been prohibited, not only by *Charaka* [11] and *Susruta*, [12] but even modern sexologists and biologists have described it. *Acharya Bhela* has clearly mentioned that to prevent the mental disorders the consanguineous marriage should be avoided. [13] Before going for conception the *Acharyas* have prescribed an extensive and exhaustive list of restrictions and rules for a woman which may affect the child psychology. [14] To have a healthy and intelligent progeny they should be followed strictly.

- **Prevention during Pregnancy** – In the context of *Garbhopaghatakara bhavas Acharya Charaka* has advised to avoid various dietetic regimens, habits and trauma otherwise they can lead to absorption of birth of a child and various psychological disorders e.g. excessive sleep.<sup>15</sup> An excessive consumption of alcohol by a pregnant woman may deliver an idiot with poor memory or hyper activated or mentally impaired child.[15] In the fourth month of pregnancy, the fetus heart which is the seat of consciousness, becomes active hence it expresses its desires through the mother, this state is called *dauhrda*. [16] The wishes and desires of *Dauhrdini* if not honored and gratified may lead to various congenital abnormalities.

- **Prevention during Delivery**- During the second stage of labour, *Susruta* has pointed out that on not following the instructions for bearing down the pains by an *Asannaprasava* women may lead to congenital abnormalities which will terminate into psychological abnormality.[17]

- **Prevention during the neonatal period of child** - In this respect, in *Ayurvedic Neonatology*, there are two terms viz. *Jatamatra* (new born) and *Jatakarma* (ceremony). Just after birth first measure to protect child & his or her respiration by *prana pratyagamana* (resuscitation) method in the form of cleaning of mukha sleshama and physical stimuli along with *prana vayu* (oxygen) with the help of *Krishana kapalika shurpa* (hollow tube) with the aim to prevent the birth asphyxia which is a common cause for mental abnormality. [18] Further, the *Acharyas* have also described various other necessary methods to prevent the physical and mental disorders. They are *raksakarma* [19] (protective measure), *dhupana karma* [20] (fumigation) etc. Various *dharana* [20] drugs (ornamental medicine) have been mentioned to improve the *ayu* (age), *medha* (intellect) and *smriti* (memory). After establishment of the respiration in a neonate *Jatakarma* (ceremony) is performed with *madhu* (honey), *ghrta* and *swarna* (gold) in unequal proportion with chanting of the *Vedic mantras* to the child for promoting *medha* and *bala*. [21] The basic aim behind this *Jatakarma* (ceremony) is to stimulate the intellectual

ability & immune system of the child from the very neonatal period.

### Specific Treatment:

In Ayurveda, various remedies have been described by the *Acharyas* to improve the mental ability. *Acharya Charaka* mentions that *Mandukaparni*, *Guduchi*, *Yashtimadhu* and *Shakhapushpi* are wholesome for intellect and among them *Shakhapushpi* is the drug par excellence. [22] *Acharya Kasyapa* has mentioned some lehas viz. *Kalyanaka ghrta*, *Brahmi ghrta*, *Pancagavya ghrta*, *Samvardhana ghrta*. [23]

*Acharya Vagbhatta* has advocated four yoga's to promote the *medha* (intellect), *bala* (strength) and *varna* (color) of a child. [24] They are as under –

- Fine powder of *Swarna* with *Ghrta*, *Vacha* and *Kusta*.
- *Matsyaksi*, *Swarna*, *Vaca*, *Ghrta* with *Madhu*.
- *Arkapuspi*, *Ghrta*, *Swarna* and *Vaca* with *Madhu*.
- *Swarna curna*, *Kaidarya*, *Swetadurva* and *Ghrta* with *Madhu*.

*Acharya Susruta* opines that continuous practice of learning also improves *medha* and *buddhi*. This principle of *Susruta* can be very fruitful for the mentally deficient child in form of special education and teaching. Apart from these drug therapies there are certain other methods of improving the memory about which *Acharyas*

have discussed in different contexts such as *Abhyasa* (continue practicing), *samadhi* and *yoga*. All these sharpen the memory and elevate the level of *buddhi*. This principle of *Susruta* is very much important and is a fundamental factor behind all the learning processes.

### CONCLUSION

On the above basis it is concluded that Ayurveda enumerates various etiological factor which on derangement at time of embryogenesis cause to develop mental retardation that manifests at the time of prenatal, natal, post natal stages. Mental Retardation refers to subnormal general intellectual functioning and is associated with impairment in either learning and social adjustment or maturation or both. Medical treatment of Mental Retardation has offered little hope for its total or even partial alleviation. Ancient *Acharyas* have laid much emphasis on the prevention of mental disorder & promotion of mental health under the topic '*Medhya Rasayana Therapy*'. Under this therapy, they have classified many drugs like *Vacha*, *Yashti madhu*, *Mandukaparni*, *Shankhpushpi*, to mention a few in promoting mental development and alleviating mental illnesses as well. By adopting such measure we can protect to our coming progeny. Thus, Ayurveda may play an important role in the management of Mental Retardation.

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