

## THE ROLE OF GARBHOPAGHATAKARA-BHAVAS (prenatal factors which inflict harm on the product of conception) IN CHILDHOOD AUTISM: A RETROSPECTIVE COHORT STUDY

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### ABSTRACT

Among the morbidities grabbing worldwide attention, Autism is an important and indispensable condition which adversely affect the future of growing children and that pushes the whole family to a world full of social stigma. Autism, a neurodevelopmental disorder with a lot of hypothesized etiologies is an unanswered question for the medical field. As a precise treatment for its complete cure is not existing, prophylactic measures are of most urgency. The various prenatal factors mentioned in Ayurvedic classics are known to cause several diseases in children. *Garbhopaghatakara-bhavas* are the typical dietetics and mode of life contraindicated for pregnant women. A retrospective cohort study was conducted to evaluate the role of *Garbhopaghatakara-bhavas* in childhood-Autism based on the condition, in the light of *Trividha hetus* of diseases, which concluded that *Prajnaparadha* constituted the majority followed by *Asatmyendriya samyoga* and then *Parinama*. Proper analysis of these prenatal factors can guide towards the formulation of a better preventive plan for Autism.

**Keywords:** Childhood-Autism, *Garbhopaghatakara bhavas*, prenatal causes, *Trividha-hetu*

### INTRODUCTION

Autism is one of the major concerns of pediatrics in the present era. It is a neurodevelopmental disorder of unknown etiology.<sup>(1)</sup> From early childhood, the characteristic features like impairment in communication skills, social interactions and reciprocity, and imagination and play, etc. can be noticed in this condition. As per the report from the World Health Organization in April 2018, 1 in every 160 children has an Autism Spectrum Disorder.<sup>(2)</sup> While considering the gender difference in prevalence, Autism is more prevalent in boys than in girls.

Presently, Autism is regarded as a functional abnormality of the brain. Even though the exact cause of Autism is unknown, the various causes which are believed to contribute to the occurrence of Autism are genetic abnormalities, various environmental factors, hormonal imbalance, etc. The emotionally distant parenting styles (refrigerator mothers) were previously thought as etiological factors of Autism stays invalid. MMR vaccination which was reported as the culprit has been proved to be not a cause for Autism.<sup>(3)</sup> The association between prenatal events

and the development of autism is speculative. Since now, no interventions have proven widely efficacious in providing complete relief to autism. Therefore the prevention of Autism needs utmost attention. As per Ayurvedic classics, *Garbhopaghatakara-bhavas* (the prenatal factors which harm the product of conception)<sup>(4)</sup> are considered as major etiological factors in the causation of various morbidities in children. The present study evaluates the role of these factors in the occurrence of Autism.

#### **Etiopathogenesis of Autism as per Ayurveda:**

As per Ayurvedic classics, the acquisition of knowledge takes place by a sequence of events where the conjunction of *Atma* (soul), *Manas* (mind), *Indriya* (sense organ), *Indriyarth*a (object of perception) happens in the order.<sup>(5)</sup> *Atma* is the one which is responsible for cognition and *Manas* is the substratum of *Indriyas* (sense organs) to perceive *Indriyarth*a (object of perception). There are six factors responsible for the mental constitution of the fetus. They are *satwa* (mind) of mother and father, the objects of hearing, actions of the pregnant mother and past deeds.<sup>(6)</sup> In children with Autism, the conjunction between *Atma* and *Manas* is disrupted i.e. *Manovaha-sroto-dusti* (vitiation of channels of consciousness that flows through the mind) along with *Tridosha dusti* (vitiation of three *doshas* namely - *Vata*, *Pitta*, *Kapha*) is the characteristic feature in Autism. As per Ayurvedic classics, the same etiopathology is explained in the context of *Unmada* (Disease of mind characterized by mental confusion, etc.). The characteristic features of *Unmada* as per Ayurvedic classics are:

1. *Manovibhrama* (perversion of mind) - Due to this, the subject does not think about such mat-

ters which are worth thinking. Beside this, he or she also indulges in thinking about the matters which is not supposed to think about.

2. *Budhi vibhrama* (perversion of intellect) - Due to this, the subject understands the eternal things as transient and advantageous as disadvantageous.
3. *Samjnajnana vibhrama* (impaired sensory perception)
4. *Smruti vibhrama* (impairment of memory)
5. *Bhakti vibhrama* (abnormal desires)
6. *Sheela vibhrama* (inappropriate manners and behaviors)
7. *Cesta vibhrama* (abnormal activities)
8. *Achara vibhrama*(loss of learned skills)<sup>(7)</sup>

By analyzing the etiopathology and clinical features of Autism, it can be included under the broad spectrum of *Unmada*.

#### **Garbhopaghatakara bhavas as per Ayurveda:**

As per Ayurveda, the food, activities and mental status of a pregnant woman plays an important role for the development of both health as well as disease which may be both physical and mental of its kind in her child. *Garbhopaghatakara-bhavas* are typical dietetics and mode of life contraindicated for pregnant women or the factors likely to harm the fetus and is assumed to have a major role in the etiology of Autism. The various factors of this kind and their effects are explained in Ayurvedic classics. These factors do not exceed the umbrella of threefold etiology of diseases i.e. *Asatmyendriyarth*a *samyoga* (Improper contact of the senses with their objects), *Prajnaparadha* (Improper functioning of mental faculties, in turn leading to the execution of inappropriate actions) and *Parinama* (Time-factor).



**Diagram 1:** Classification of *Trividha hetus* (Three-fold etiology of disease)

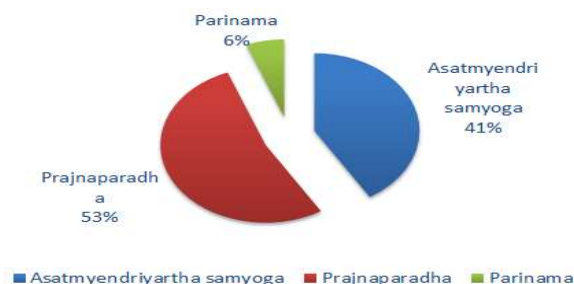
As the prevalence of childhood autism is rising alarmingly, studying the role of *Garbhopaghatakara-bhavas* can provide a better idea of the etiology and thereby help in its prevention. Following are the main factors in *Garbhopaghatakara-bhavas* mentioned in various classical textbooks of Ayurveda. Activities of pregnant lady that cause physical strain, trauma, suppression of natural urges, lying in supine position, excess exposure to sunlight, neglecting longings of pregnant lady, excessive sexual intercourse, intake of heavy meals, intake of excess meat, intake of food items which are too hot, spicy, dry and incompatible food items, qualitatively and quantitatively excess or less food intake, consuming alcoholic preparations, fasting, habitual indigestion, wearing dark and tight dress, excessive day sleep, keeping awakened at night, mental stress, watching the setting sun or moon, not following customs and rituals, going near riverbanks or waterfalls, visiting garden, exposure to unhygienic conditions, and exposure to etiological factors of any diseases.<sup>(8)</sup>

### MATERIALS AND METHODS

In this study, the data was collected from mothers of autistic children using a questionnaire which was generated on the basis of Ayurvedic classical references about *Garbhopaghatakara-bhavas*. Irrespective of religion, gender, socio-economic conditions, nativity, etc. consecutive 30 cases of Childhood Autism were selected from OPD, Govt. Ayurveda College Hospital for Women and Children, Thiruvananthapuram till the sample size obtained and the results were statistically analyzed.

### RESULTS:

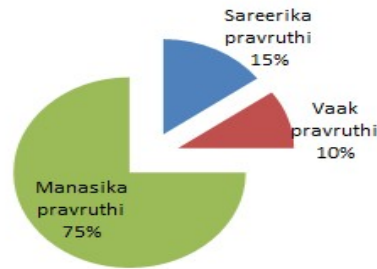
As per Ayurvedic classics, all the etiological factors of diseases can be brought under the umbrella of *Trividha hetus* (threefold etiology for causation of disease). Therefore the data obtained in this study under *Garbhopaghatakara-bhavas* was categorized under the *Trividha hetus* and expressed in percentage in a pie diagram.



**Diagram 2:** Percentage of involvement of *Garbhopaghatakara bhavas* expressed as *Trividha hetus*

The pie diagram shows that, among the three causative factors (*Trividha hetus*) of disease, *Prajnaparadha* (Improper functioning of mental faculties, in turn leading to execution of inappropriate actions) was found in 53% of pregnant mothers, whereas 41% constituted *Asatmyendriya samyoga* (Improper contact of the senses with their objects) and 6% constituted *Parinama* (Time-factor).

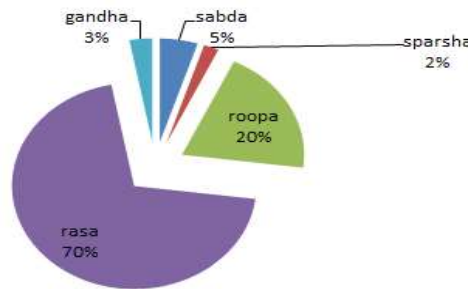
*Prajnaparadha* comprises of inappropriate actions of three kinds i.e. *Sareerika pravruthi* (physical activities), *Manasika pravruthi* (mental activities) and *Vaak pravruthi* (actions of faculty of speech). Each of these three sub-categories consolidated to percentage is shown below.



**Diagram 3:** Involvement of *Trividha karma* performed under *Prajnaparadha*

Among the 53% pregnant mothers with a predominance of *Prajnaparadha*, 75% is constituted by improper *Manasika pravruthi* (mental activities),

whereas improper *Sareerika pravruthi* (physical activities) constitutes 15% and improper *Vaak pravruthi* constitutes 10% of cases.



**Diagram 4:** Involvement of each element in *Asatmya indriyarthasamyoga*

Among the *Asatmyendriyarthasamyoga* (Improper contact of the senses with their objects) which constitutes 41% of whole causative factors, the improper use of *rasa* (taste) constitutes 70%; among this, excess use of pungent, salty food items was predominant. The improper use of *Roopa* (object of vision) constitutes 20% and *sabda* (object of hearing) constitutes 5% and *sparsha* (object of touch) constitutes 2%.

*Parinama* or *Kala* (Time-factor) which denotes the perversions in the matter of time, like the time of delivery, time of food and weather conditions contributed to 6%.

## DISCUSSION

The threefold etiologies of disease mentioned in Ayurvedic classics include:

**Asatmyendriyarthasamyoga** (Improper contact of the senses with their objects)

**Prajnaparadha** (Improper functioning of mental faculties, in turn leading to the execution of inappropriate actions)

**Kaala/Parinama** (Time) <sup>(9),(10)</sup>

**Asatmyendriyarthasamyoga** (Improper contact of the senses with their objects):

It consists of either *hinayoga* (poor contact), *atiyoga* (excess contact) or *mithyayoga* (improper contact) of five senses: *sabda* (object of hearing), *sparsha* (object of touch), *roopa* (object of vision), *rasa* (object of taste) and *gandha* (object of smell).

1. *Sabda* (object of hearing): Prolonged hearing of high volume sounds like rap music and irritating sounds like violence in films etc., voices of crying, grief, anger, etc. stressful events in visual media.

2. *Sparsha* (object of touch): Unhygienic conditions, use of various unhealthy cosmetics, ornaments and

skin treatments, use of water or oil in excess cold or hot condition, etc.

3) *Roopa* (object of vision): Prolonged use of television, computer, mobile phone, using these visual media in dark room and also viewing them at too far or too near, watching horror movies, violence, etc.

4) *Rasa* (object of taste): *Taste* is having prime importance among *Garbhopaghatakarakabhavas* in the causation of Autism. Food is the main contributing factor for the formation of mind and also food items with *Satwika*, *Rajasika* and *Tamasika* kinds of nature impart respective qualities to mind. <sup>(11)</sup> Intake of a particular *rasa* in excess, consumption of food without following the rules of food intake, etc. are also the deviations of *rasa*.

5) *Gandha* (object of smell): Exposure to the pungent smell of chemicals, decayed things, etc., and exposure to various atmospheric pollutants.

**Table 1:** The factors involved in *Asatmyendriyarthasamyoga*

ASATMYENDRIYARTHA SAMYOGA				
<i>Sabda</i>	<i>Sparsha</i>	<i>Roopa</i>	<i>Rasa</i>	<i>Gandha</i>
Prolonged hearing high volume sounds	Unhygienic conditions	Prolonged use of computer, TV, mobile phone etc.	Intake of a particular <i>rasa</i> in excess	The pungent smell of chemicals-paint, deodorants
Rap music	Various chemicals-cosmetics, disinfectants etc.	Using visual media in dark room	Contaminated food, chemically treated food	The smell from wastes, decayed things
Irritating noises like violence in films etc.	Ornaments of different metals	Looking far/near objects excessively	Improperly processed food	Disgusting smell
Voices of crying, anger, etc.	Use of water or oil in excess cold or condition etc.	Watching horror movies and violence	Intake of food without following the rules	Atmospheric pollutants

**Prajnaparadha** (Improper functioning of mental faculties, in turn leading to the execution of inappropriate actions): *Prajnaparadha* is constituted by the inauspicious activities by *vaak* (speech), *manas* (mind) and *shareera* (body) caused by *dhee vibhramsha* (lack of discriminating power), *dhruti vibhramsha* (inability to get away from sensual objects) and *smruti vibhramsha*

(vitiated memory caused by *Rajas* and *Tamas* which are qualities of mind).

1) *Vaak pravruithi* (verbal activities): It refers to various verbal activities of the pregnant mother. Talking irrelevant to time and situation, telling lies, using harsh words, etc.

2) *Mana pravruithi* (mental activities): This includes various mental activities like excessive thinking, and

the emotions like fear, grief, disappointment from neglecting the longings during pregnancy, and the negative energy resulting from not following the customs and rituals.

3) *Sharirika pravruithi* (diet and physical activities): Activities that cause physical strain, trauma, suppression of natural urges, lying in supine position, excess exposure to sunlight, excessive sexual intercourse, intake of heavy meals, excess meat and too hot, spicy, dry and incompatible food items, Qualitatively and

quantitatively excess/less food intake, consuming alcoholic preparations, using contraindicated medications, fasting, habitual indigestion, wearing dark and tight dress, excessive day sleep, keeping awake at night, mental stress, watching the setting sun or moon, not following customs and rituals, going near riverbanks/waterfalls, visiting garden, exposure to unhygienic conditions, exposure to etiological factors of any diseases.

**Table 2:** Factors involved in *Prajnaparadha*

<b>PRAJNAPARADHA</b>		
<b>Saririka pravruithi</b> (food & activities)	<b>Vaak pravruithi</b> (various verbal activities of the pregnant mother)	<b>Manasika pravruithi</b> (various mental activities)
•Physical strain	•Harsh words	•Excessive thinking
•Hot, spicy, dry, incompatible food items •Fasting •Quantitively & qualitatively excess/less food intake	•Telling lies •Words of jealousy	•Fear, grief, etc. •Disappointment from neglecting longings during pregnancy
•Contraindicated medications	•Talking irrelevant to time and situation etc.	•Negative energy resulting from not following customs & rituals

**Kaala/Parinama** (time):

Anything that happens untimely refers to improper *kaala*, either it may be the time of delivery, time to take food, climate, etc.

## CONCLUSION

The collected data has shown the presence of *Garbhopaghatakara bhavas* (perinatal causes that harm the fetus) in mothers of children affected with Autism. The classification of *Garbhopaghatakara bhavas* into *Trividha hetus* (three-fold causes of diseases), provided categorical information regarding the presence of *Asatmyendriyarthasamyoga* (improper contact of senses with their objects), *Prajnaparadha* (improper functioning of mental faculties, in turn leading to the execution of inappropriate actions) and *Parinama* (time). Among three-fold causes of diseases, *Prajnaparadha* was a predominant factor which is powerful enough to vitiate all *doshas*, in which improper mental activities was the prime cause. Next to

*Prajnaparadha*, *Asatmyendriyarthasamyoga* was the second most factors, in which improper use of the sense of taste was dominant. *Parinama* (Time factor) which includes seasonal variations etc. is the third major factor. Hence, to prevent childhood Autism, a systematic lifestyle is to be followed, avoidance of physical and mental strain is to be done, and the diet in pregnant mother is to be properly maintained. *Garbhinicharya* (regimen to be followed in pregnancy) mentioned in Ayurvedic classics are to be essentially followed for the attainment of overall health, which also stands essential for the prevention of Autism. Long-term Ayurvedic interventions are to be employed in known cases of Autism as the condition is believed to have its involvement even in its genetic makeup. Further researches from different populations with more sample size can provide more insights into the involvement of prenatal factors in the causation of Autism thereby the precautionary and awareness measures can be molded.

## Acknowledgment

The author expresses sincere thanks to all the faculties of Dept. of Kaumarabhritya Govt. Ayurveda College, Thiruvananthapuram for their kind support and guidance.

## REFERENCES

1. Kliegman, Behrman, Jenson, Stanton. *Nelson Textbook of Paediatrics*. Vol.1, 18 ed; Elsevier Publications; 134
2. Autism Spectrum Disorders [Internet]. World health organization; [cited 2019Apr27]. Available from: <https://www.who.int/news-room/factsheets/detail/autism-spectrum-disorders>
3. Wakefield's affair: 12 years of uncertainty whereas no link between autism and MMR vaccine has been proved [Internet]. Maisonneuve H, Floret D. *Presse Med*. 2012 Sep; French; [cited 2019Apr27]. Available from <https://www.ncbi.nlm.nih.gov/pubmed/22748860>
4. Vagbhata, Bhashagacharya Harisastri Paradaraka Vaidya(2005) *Astanga Hrdaya*(reprint ninth edition) Varanasi: Chaukhambha Prakashan; Sareera sthana 1/44-47; 361-377
5. Chakrapani, Agnivesa, Vaidya Jadavji Trikamji Acharya (2007) *Caraka Samhita* (reprint) Varanasi: Chaukhambha Prakashan; Sootra Sthana 8/12; 55-61
6. Agnivesha. JaatISOotriyam sareeram. In: Yadavji Trikamji Acharya (ed.) *Caraka Samhita* (reprint). Varanasi; Chaukhambha Prakashan; 2007. 340-352
7. Agnivesa, Vaidya Jadavji Trikamji Acharya(2007) *Caraka Samhita*(reprint) Varanasi: Chaukhambha Prakashan; Nidana Sthana 7/5; 222-225
8. Premavati Tewari(2009), *Ayurvediya Prasuti tantra evam striroga Part1 Prasuti tantra*(reprint), 2 ed. Varanasi: Chaukhambha Orientalia; 228
9. Agnivesha. Tisreshaniyam Adhyayam. Vaidya Jadavji Trikamji Acharya(2007) *Caraka Samhita*(reprint) Varanasi: Chaukhambha Prakashan; Sootra Sthana 11/37-41; 67-78
10. Agnivesha. Deergham jeevitiyam Adhyayam. Vaidya Jadavji Trikamji Acharya(2007) *Caraka Samhita* (reprint) Varanasi: Chaukhambha Prakashan; Sootra Sthana 1/54; 1-24
11. A.C. Bhaktivedanta Swami Prabhupada, Bhagavad-gita As It Is, 2nd ed. Mumbai: The Bhaktivedanta book trust;1972;673-694

**Source of Support: Nil**

**Conflict Of Interest: None Declared**

How to cite this URL: Aneeshya A. Prasad: The Role Of Garbhopaghatakara-Bhavas (Prenatal Factors Which Inflict Harm On The Product Of Conception) In Childhood Autism: A Retrospective Cohort Study. *International Ayurvedic Medical Journal* {online} 2019 {cited May, 2019} Available from:

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