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**MVR AYURVEDA MEDICAL COLLEGE
PARASSINIKKADAVU**

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As we welcome the vibrant hues of summer, our minds turn to the ancient wisdom of Ayurveda, a treasure trove of natural remedies and holistic living. This season, let's rediscover the timeless principles of balance and harmony that Ayurveda offers, and explore how its gentle yet potent practices can revitalize our bodies and minds.

However, amidst the pursuit of wellness, we cannot ignore the pressing concern of substance abuse among the new generation. The allure of drugs and intoxicants has become a significant challenge, threatening the very fabric of our society. As educators and mentors, it's essential that we address this issue head-on, fostering open conversations and promoting awareness about the risks and consequences of substance abuse.

In this context, our institution's commitment to creating a drug-free campus is a step in the right direction. By working together, we can build a supportive environment that encourages students to make informed choices and cultivate healthy habits.

In this issue of E-Bodhi, we take a closer look at Ayurveda Pediatrics and Gynaecology, two vital branches of medicine that play a crucial role in shaping a healthy new generation. Our upcoming special issue, featuring the Agada Training Seminar, promises to be a thought-provoking exploration of the latest developments and insights in the field.

As we navigate the complexities of modern life, it's heartening to see our community come together to promote wellness, awareness, and positive change. We hope that this issue of e-Bodhi will inspire and empower our readers to embark on their own journeys of self-discovery and growth.

Happy Reading!

Prof. E. Kunhiraman

Executive Director, MVR Group of Institutions

EDITORIAL



Chief Editor:

PROF. DR. A.K MURALEEDHARAN MD (AYU)

PRINCIPAL

MVR Ayurveda Medical College, Parassinikkadavu

Dear Readers,

It gives me immense pleasure to present the March Issue of E-Bodhi. This issue has been thoughtfully compiled by the faculties of the Departments of Prasuti Tantra and Kaumarabhritya, two specialties that beautifully represent Ayurveda's commitment to nurturing life from the very beginning.

We are also proud to feature two esteemed guest authors, Dr. Prajitha PK, Assistant Professor of Prasutitantra Department of Government Ayurveda College, Kannur, and Dr. Nithya AK, Specialist Medical Officer, Government Ayurveda Hospital, Koyankara, Kasargod, whose articles enrich this issue with fresh insights and diverse perspectives. Their contributions reflect the collaborative spirit of Ayurveda's evolving academic landscape.

Another important aspect to be mentioned is the postnatal care and neonatal services provided at our institution. Our college takes great pride in offering comprehensive and compassionate care to mothers and newborns, following Ayurvedic protocols that ensure optimal recovery and early development. These services are not only clinically significant but also uphold the traditional wisdom that has stood the test of time.

The Prasuti Tantra department has been offering holistic and effective infertility treatments, combining classical approaches with individualized care. These treatments have brought hope to many families and demonstrate the relevance and efficacy of Ayurveda in addressing contemporary reproductive health issues.

Meanwhile, the Kaumarabhritya department continues to conduct Swarna Prashana, a time-honored Ayurvedic practice aimed at enhancing immunity, intellect, and overall development in children. This monthly ritual has been well-received by parents and has become a valuable part of community outreach and preventive healthcare.

As we reflect on these services, it becomes clear that Ayurveda is not just a system of medicine, but a way of life—adaptable, sustainable, and deeply rooted in holistic well-being. However, to sustain its relevance in the modern era, there is a growing need for innovation and research. Our science must continue to evolve through meaningful research that honors its foundational texts while also addressing current health challenges.

Let us encourage a research culture that not only validates but also contributes to the enrichment of Ayurveda itself. I extend my heartfelt appreciation to the editorial team, the contributing authors, and all those who support and engage with E-Bodhi. May this issue serve as an inspiration for academic growth, clinical excellence, and renewed commitment to the Ayurvedic way.

Warm regards,

Dr. Muraleedharan A.K MD (AYU)

Principal, MVRAMC

Chief Editor, E-Bodhi

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PRECONCEPTION CARE - PREPARE FOR YOUR BLESSING

MAKE A PLAN & TAKE ACTION

Planning is crucial in every aspect of life, from personal to financial matters. However, when it comes to pregnancy, the approach is often different. Globally, 44% of pregnancies and 23% of births are unintended, with 56% of unintended pregnancies ending in abortion. In India, birth defects occur in about 6-7% of births. This highlights the importance of preconception care (PCC).

WHY PRECONCEPTION CARE (PCC)?

PCC offers an opportunity for both partners to enhance their health before pregnancy, contributing to the well-being and quality of life for their future child. The critical period for organ development occurs from Day 17 to Day 56 after conception, making PCC crucial, as it intervenes earlier than prenatal care. In Ayurveda, the importance of good progeny is emphasized. Garbadhana Samskara, the first rite of passage, refers to the ceremony performed before conception to ensure both partners are in agreement about having a child. Ayurveda views conception as a union of physical elements and the entry of Satwa (soul) into the womb, making each pregnancy a unique and divine event.

WHO MUST EMPLOY PCC?

- Couples of advanced ages
- Consanguineous couples
- Parents with differently-abled children
- Couples with known medical conditions (e.g., diabetes, hypertension)
- Those who have undergone cancer treatment
- Individuals exposed to occupational health hazards
- All couples eager for conception

ESSENTIAL ELEMENTS FOR CONCEPTION

Ayurveda mentions four essential elements- Garbha Sambhava Samagri, whose equilibrium contributes towards conception, similar to nurturing a plant. These are- Ritu (timing), Kshetra (fertile land), Ambu (nourishment), Beeja (quality seeds), Anila (vata dosha) & Hridi (mental component).

RITU – PLAN THE TIMING

Conception should occur when both partners are stable physically, mentally, and financially.

Age: The ideal fertility age for women is 20-26 years, while for men it is 20-30 years. Women's fertility declines after 35 years, and men's sperm quality can be affected with age, increasing the

RITU – PLAN THE TIMING

Conception should occur when both partners are stable physically, mentally, and financially.

- Age: The ideal fertility age for women is 20-26 years, while for men it is 20-30 years. Women's fertility declines after 35 years, and men's sperm quality can be affected with age, increasing the risk of genetic disorders.
- Period: The ideal period for PCC is three months before conception. The fertile period for conception is usually between the 12th and 16th day of the menstrual cycle.
- Season: As per Ayurveda during Hemanta ritu/ pre winter season (November-December) person are with maximum bala (strength and immunity), and hence it is the most acceptable season for conception.

KSHETRA – PREPARE THE BASEMENT

The uterus, or endometrial layer, plays a crucial role in sustaining a pregnancy. Ensuring a healthy uterus, free from systemic illness, is necessary for conception. Ayurveda highlights the importance of Rajaswala Charya (regimen during menstruation) to prevent gynecological diseases and maintain uterine health. Studies show that poor uterine health contributes to pregnancy complications such as low birth weight. A balanced diet and lifestyle are crucial during the preparatory phase to maintain uterine health.

SCREENING FOR GYNECOLOGICAL & SYSTEMIC ISSUES:

Screening required	Rules out
Ultrasonography	Uterine anomalies like myoma, septate uterus, adenomyosis
TORCH Screening	Female fond of pets Recurrent 1st trimester abortion
APLA Screening	Recurrent miscarriage
Blood sugar levels	Pre-gestational / overt diabetic women
Thyroid function tests	1 st trimester abortions

RAJASWALA CHARYA

Practicable form during the preconception phase includes;

- Diet- Food that improves the appetite, nourishing food like barley or rice prepared with milk and ghee, avoid constipating diet, sour, salty and spicy food.
- Lifestyle- Complete rest from all strenuous activities, maintain hygiene-advise Triphala wash during periods, avoid day sleep, exercise & intercourse.
- Vegadharana or suppression of natural urges must be strictly stopped during the preparatory phase.

AMBU – PREPARE TO NOURISH

Proper nourishment and metabolism are vital to the reproductive process. During the preconception phase, it is essential to focus on correcting basic metabolism (Agni) and purifying the microchannels (Sroto Shodhana) to ensure a smooth supply of nutrients to the endometrium. Ayurveda emphasizes the importance of food and its impact on physical and mental health.

DIETARY GUIDELINES DURING THE PREPARATORY PHASE:

- Ahara vidhi Vidhana (codes of conduct) needs to be followed. Always have food after considering one's own need, appetite and body constitution-never be a glutton.
- Taste (Rasa) depending on one's own body constitution must be included in your food. Diet and taste modifications as per body constitution should be planned during the preconception period
- Food is the sole contributor to the psychological constitution. Couple in the preconception phase must use only satwika ahara. Some such food includes nourishing, pleasing to mind, freshly prepared such as ghee, milk, butter, sweet fruits, salads, Sali-Shashtika type of rice, wheat, ragi, green gram, millets etc. Strictly avoid pre-cooked, refrigerated & tinned food, spicy-salty food, stale food, fried snacks etc. during this 3 months.
- Keep away from dietetic experiments like Keto diet. While under PCC a balanced diet including carbohydrates, fats and proteins are needed rather than mere weight reduction with disordered eating.

NUTRITIONAL REQUIREMENTS:

- Anaemia- Hb must be evaluated and maintained $>/= 11\text{gm/dl}$. Food supplements rich in iron must be encouraged.
- Folic acid supplements is mandatory during the 3 month preparatory phase, to improve the quality of ovum, and prevent neural tube defects. Food rich in folates like dark green vegetables, broccoli, beans, pea, lentils, beet, corn, nuts etc. are preferable.
- Strict restriction to tobacco, alcohol & caffeinated beverages during this period.

ENVIRONMENTAL TOXIN EXPOSURE:

- Medicines like antihypertensive, antiepileptic, antipsychotic drugs are potent teratogen, which must be tapered and stopped prior to conception.
- Several cosmetic products like nail polish, lipsticks, anti-ageing creams etc. are cocktail of chemicals & potent toxics on reproductive system. Strict cessation of such products during preconception phase is required.

BEEJA – YIELD THE BEST SEED

The quality of the ovum and sperm is the result of the three-month preconception period. The ovum and sperm is the sum total of the way you ate & way you perceived during the 3 month period. The ovum takes about 85 days to mature, and sperm takes about 74-90 days. During this time, both partners should focus on improving their reproductive health. Ayurveda outlines several issues that can affect the quality of semen and menstrual blood. Sukra-Artava dushti is the demonstration of 8 types of visible doshic derangement in the characters of semen and menstrual blood. Such complaints are demonstrable in many couples, which can be effectively managed through

Ayurveda medicines during the preconception period, facilitating the attainment of sudha sukra- artava & a healthy conception.

SCREENING FOR REPRODUCTIVE HEALTH:

- Semen analysis in males to detect issues prior to conception
- Follicular study with hormone profile, or ovulation kit in females, help to predict the dates of ovulation
- Genetics screening for couples with a family history of chromosomal abnormalities

DIET & EXERCISE:

- Food- Semen/sukra is considered to be soumya- highly gentle and soft substance, predominant in Jala mahabhoota, in contrast ovum/artava is agneya or predominant in Agni mahabhoota. For males: Foods like ghee, milk, and nuts can improve sperm quality and for females those which increase the pitta dosha- sesame, urad dal, garlic, jaggery, fish, fermented wines, horsegram etc.
- Exercise- Weight management is crucial for both partners; regular exercise and a balanced diet should be followed to maintain a healthy BMI. It is mandatory to maintain the BMI in normal limit during preconception period.

OCCUPATIONAL HAZARDS:

- Limit exposure to toxins, paints, chemicals, pesticides & radiation. Best solution to resolve these hazards is to take a vacation of 3 months, during which enable the body and gametes to grow anew.
- Impact of heat stress in males particularly in drivers, chefs, those working in boiler rooms are high. Regular cold sitz bath and switching to loose pyjamas helps regulate the scrotal temperature.

ANILA & HRIDI – PREPARE THE MIND

Mental health is just as important as physical health in the preconception phase. Stress can significantly affect fertility, so couples should ensure they are mentally and emotionally ready for conception. Ayurveda considers mental stability crucial for conception, and emotional intimacy between partners enhances the chances of a successful pregnancy. The 5 types of vata dosha together controls reproductive functions- Prana, Udana & Vyana vayu controls the psychosexual functions, Samana & Vyana vayu together controls gametogenesis, and Apana & Vyana vayu controls ejaculation, fertilisation & implantation. Ayurveda considers Hridi or mental health as the most important factor in conception. It is truly said..“Soumanasyam garba jananam sreshtam” The act of conceiving must actually be an invitation for the little one, which is established only when both the partners develop the intimacy within them.

PSYCHOLOGICAL AND EMOTIONAL READINESS:

- Postponing or spacing pregnancy till the couple are mentally stable and intimate
- Address any ongoing issues in the relationship
- Seek counselling if there are mental health concerns like anxiety or depression
- Resolve any history of abuse or trauma before attempting conception

SOCIAL AND ENVIRONMENTAL FACTORS:

- Considersocio-economic factors that may add stress to the couple
- Resolve work-related stress or violence issues

POSSIBLE INTERVENTIONS

Preconception care is actually a mode of healthy living apart from a disease to be treated. [The three-month preparatory phase can be divided into three stages:

- 1st month-sodhana therapy/purification methods
- 2nd & 3rd months- Rasayana- vajeekarana therapy/ rejuvenative & aphrodisiac methods, healthy living practice/sadvrittam.
- 4th month onwards- period of actual conception.

1ST PHASE- PURIFICATORY THERAPY

- Sodhana therapies like Snehapana (medicated ghee) and Swedana (steaming) help cleanse the body and prepare it for conception.
- Vamana and Virechana (therapeutic vomiting and purgation) help expel toxins from the body and improve reproductive health.
- Vasthi (medicated enema therapy) is one of the most potent panchakarma therapy. In females,
- Uttaravasthi (intrauterine instillation of medicine) improves the receptivity of endometrium & activates the ovarian factor.
- Nasya (nasal instillation) plays important role in stimulating the hypothalamo-pituitary-gonadal axis

2ND PHASE- REJUVENATION AND HEALTHY LIVING (2ND & 3RD MONTHS)

- Rasayana therapy (rejuvenation) helps improve vitality and reproductive health. Drugs like Aswagandha,
- Kapikachu, Shatavari etc are potent fertility rejuvenators.
- Vajeekarana (Aphrodisiac) drugs for males >40 years
- Sadvrittha (healthy living practices) include daily routines, diet, yoga, and mental health practices to support fertility and emotional well-being.
- Dinacharya (Daily routine) Wake up early, cleanse the body, and follow a healthy diet
- Engage in light exercise, yoga, and meditation
- Spend quality time with your partner and practice self-care
- Yogasana- Suryanamaskara, Yogamudrasana, Bhadrasana, Poorna Shalabhasana helps in improving the blood flow to reproductive organs. Pranayama helps relieve stress and maintain wellbeing of the couple.



3RD PHASE- ACTUAL TIME OF CONCEPTION

- After the preparatory period, focus on conception. It is rare to conceive on the first try, so patience is key.
- Have regular intercourse during the fertile period (Day 10-16 of the menstrual cycle) but avoid pressure or performance anxiety.
- Maintain a calm, peaceful environment to support the conception process.

CONCLUSION

Preconception care is not only about achieving pregnancy but ensuring that the baby is healthy and well-cared for. The preparation before conception, as outlined in Ayurveda, addresses physical, mental, and emotional well-being for both partners. The journey to parenthood begins in the heart and mind, and being prepared for this blessing is essential.

"May you always know, my little one,
You were wished for, longed for, prayed for, and prepared for..."



Dr. Nithya A.K MD (Ayu)

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A SURVEY STUDY TO ASSESS THE ROLE OF AHARA -VIHARA OF MOTHER DURING PREGNANCY IN CHILDREN WITH AUTISM SPECTRUM DISORDERS

ABSTRACT

Autism Spectrum Disorder (ASD) is a neuro-developmental disorder. It is defined by deficits in social reciprocity and communication and by unusual restricted, repetitive behavior. In Ayurveda the concept of Garbha purva Paricharya and Garbhini Paricharya were elaborated with utmost importance to get a good progeny. The facts explained include the dos and don'ts in the form of Ahara Vihara to be followed during pregnancy and even before pregnancy. The etiology of ASD remains unclear and the reported brain abnormalities among children with ASD indicate a probable link with disturbances in the in utero period. Hence, it becomes logical to explore the antenatal risk factors of ASD, which is the reason for selecting "A survey study to assess the role of Ahara Vihara of mother during pregnancy in children with Autism spectrum Disorders"

Materials and Methods-An observational study was conducted in 100 Autistic children at Northern parts of Kerala in the year 2018-21. The data regarding Ahara and Vihara during pregnancy were collected from the parents by using Questionnaire.

Observations and Results-In Model summary, 67.8% are the risk factors of Autism and also got the significant result in severity of Autism and the risk factors by the ANOVA test. Through regression Analysis one can predict the susceptible to develop autism and by the Chi Square test found the association between risk factors and severity of Autism.

Conclusion-Proper education before conception especially regarding dos and donts regarding Ahara Vihara and taking preconceptional care is the need of the era to avoid unwanted pregnancies and also to confirm the quality of sperm and ovum before conception to pursue a healthy and good progeny.

Keywords: Autism Spectrum Disorders, Ahara Vihara, Garbhini paricharya, Garbhopaghatakara bhavas

INTRODUCTION

Autism Spectrum Disorder is defined by deficits in social reciprocity and communication and by unusual restricted, repetitive behavior. It begins in early childhood and characterized by qualitative impairment in communication skills, social interaction, reciprocity, imagination and play.[1] Prevalence estimates for Autism Spectrum Disorder (ASD) have been increasing over the past few decades, with estimates at about 5 in 10,000 in the 1960s and current estimates as high as 1 in 88.[2] It is the world's third most common developmental disorder, so to spread awareness every year 2nd April is marked as World's Autism Day.[3] In Ayurveda the concept of Garbhini paricharya [4] and the harmful effect of Garbhopaghatakara bhavas[5] were elaborated with utmost importance to get a good progeny. The facts explained includes the dos and don'ts in the form of Ahara Vihara to be followed during pregnancy and even before pregnancy. It shows the indirect link of the mother's physical and mental status and the quality of the

progeny. While coming to the Ayurvedic view the majority of clinical features of different varieties of Autism Spectrum Disorders resemble the features of Unmada. [6] This study reviews the Ahara Vihara of a lady having an Autistic child retrospectively using a questionnaire containing the questions exploring the Ahara Vihara during the pregnancy of the Autistic child.

Aim

To study the role of Ahara Vihara of mother during pregnancy in children with ASD mentioned in Ayurvedic classics.

Objectives of the study

1. To study the detailed literary review of Autism Spectrum Disorders in relation with Ahara and Vihara /Garbhini Paricharya/Garbhopaghatakara Bhavas.
2. To know the effect of Ahara and Vihara /Garbhini Paricharya/Garbhopaghatakara Bhavas.

MATERIALS AND METHODS

Source of Data

Literary source:

All the Ayurvedic, modern literatures and contemporary texts including the journals, websites were reviewed and documented about the subject for the intended study.

Method of collection of Data

An observational study was conducted in the year 2018-2021 at northern and middle part of Kerala. Minimum of 100 children fulfilling the diagnostic and inclusion criteria of either sex were selected from different parts of Kerala attended for treatment at eminent paediatric treatment centres of Kerala. The data regarding Ahara and Vihara during pregnancy were collected from the parents of these Autistic children using Questionnaire.

Study type	: Observation study
Study design	: Descriptive Cross sectional study
Method of sampling	: Simple random sampling
Sample size	: 100
Study centre	: Northern and Middle part of Kerala

Diagnostic Criteria:

Children were diagnosed on Indian scale for assessment of Autism-ISSA and Questionnaire

Inclusion Criteria:

- i. Children between the age group 2-10 years, irrespective of sex, caste, religion were included.
- ii. Children with mild, moderate and severe cardinal symptoms.

Exclusion Criteria:

- i. Mothers who were not willing to give informed consent
- ii. Children with other systemic disorders.

MATERIALS AND METHODS

Table 1 - Model Summary

C	R	R Square	Adjusted R Square	Std. Error of the Estimate
1.	823 ^a	678	349	60300

Here R Square is found to be 0.678 which signifies that 67.8% are the risk factors for Autism.

Table 2 - Severity Of Autism And The Risk Factors

Model	Sum of Squares	Df	Mean Square	F	Sig.
Regression	37.493	50	750	2.062	.006 ^b

ANOVA test shows that here F value is 2.062 and P value is .006. So, here P value is less than .01, So it is significant. The model developed in this regression analysis was statistically significant with an F value 2.062 value is less than .01

Table 3- Menstrual history and Severity of Autism

	Value	Df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)	Point Probability
Pearson Chi-Square	7.213 ^a	2	.027	.030		

Severity of Autism and menstrual history of mother was tested by using Chi-square to see the association between the factors. So here P value found to be .027. So it is significant because the P value is less than .05

Table 4 -Severity of Autism and Hereditary

	Value	Df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)	Point Probability
Pearson Chi-Square	6.255 ^a	2	.044	.043		

Severity of Autism and Hereditary was tested by using Chi-square to see the association between the factors. So here P value found to be .044. So it is significant because the P value is less than .05

Table 5- Severity of Autism and Medication supplements taken by the mother during pregnancy

	Value	Df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)	Point Probability
Pearson Chi-Square	6.031 ^a	2	.049	.052		

Severity of Autism and Medication and supplements taken by the mother during pregnancy was tested by using Chi-square to see the association between the factors. So here P value found to be. 049. So it is significant because the P value is less than .05

Table 6 -Severity of Autism and Egg taken by the mother during pregnancy

	Value	Df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)	Point Probability
Pearson Chi-Square	9.716 ^a	4	.046	.037		

Severity of Autism and egg taken by the mother during pregnancy was tested by using Chi-square to see the association between the factors. So here P value found to be. 004. So it is significant because the P value is less than .05

Table 7-Severity of Autism and history of seeing sunset, solar, lunar eclipse

	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	6.843 ^a	2	.033

Severity of Autism and history of seeing sunset, lunar, solar eclipse during pregnancy was tested by using Chi-square to see the association between the factors. So here P value found to be. 033. So it is significant because the P value is less than .05

DISCUSSION

Gender of children

In this study the Sex wise distribution of 100 patients of Autism spectrum disorders showed that maximum 73% were boys and the rest 27% were girls. One of the most consistent findings in research on ASD is this higher rate of ASD diagnosis in males than females. Two major ideas have been stated to explain this male dominance, out of which Female Protective Effect (FPE) seems more impressive. In the FPE model, girls require a greater etiological load to manifest autistic behavioral impairment due to genetic and other strong hormonal supports. [7,8]

Paternal age and maternal age at the time of conception

As observed in the study, diagnosis ASD falls more in parents between the ages of 30 to 40 years when compared to other age groups. Changes in chemical tags on sperm DNA in men and the number of de novo mutations in egg cells in females increases with the age. [9] So this shows that there is a link among the parental age and Autism. In Ayurveda classics, the ideal time for marriage and conception is below 25, hence, they should attempt for achievement of conception.

Menstrual history of mother

53% mothers of my studied children had irregular menstruation before conception. Regular menstruation with adequate bleeding indicates the general health status of the mother and healthy ovulation. Which indirectly reveals that the studied groups of children were derived lives from the sperms and ova which were qualitatively compromised.

Habits like smoking and drinking of parents

62% of fathers had habits like smoking and drinking in my survey study. This implies 62% of the mothers were passive smokers. One of the significant causes of ASD is prenatal exposure of smoking and drinking of parents. Alcohol passes through the fetal barrier between blood and brain and its effects on cerebral development are extremely complex. [10]

Medication of Mother just prior to conception for other sickness (UTI, Bronchial asthma, Dermatological diseases)

Teratogen is a substance that affects with the normal development of a fetus. The women are usually unaware she is pregnant and inadvertent drug ingestion may occur. The mother has taken the drug before implantation, (roughly prior to her expected menstrual period), there will be a little danger of malformation. The women unaware of pregnancy and inadvertent drug reaction when they were on medication like Bronchial asthma, Dermatological diseases, UTI before 3 months of conception was there in 56% of the study population. These drugs intake may be functioned as a predisposing factor for developing ASD.

Planning of pregnancy

Planning the pregnancy can help to get a healthy progeny. "A healthy baby from a healthy mother" which implies the physical and mental health of the mother should be confirmed before pregnancy. In classics also it is highlighted that Garbhadharana should do with Soumya Manas. [11] The born child emulates the character of creature who comes in thoughts of the woman during coitus /fertilization. For achievement of conception happy mood is essential. Unintended pregnancy can have negative effects on the pregnant mother and the child. It leads to delayed prenatal care, increased risk of maternal depression and anxiety. This may affect the physical and mental quality of the progeny. Among the 100 couples, 54% of the pregnancy of the studied mothers were not planned which also reveals the importance of planning a pregnancy.

Hereditary/similar disease in the family

ASD is mostly genetically heterogeneous and caused by both inheritable and de novo gene variation. ASD is estimated to be 40-80% heritable. Inferences from genetic epidemiological study suggest that ASD is one of the most heritable of all psychiatric conditions. 56% of the studied couples had a history of hereditary / similar disease in the family proves this point. In Atulya gotriya Adhyaya it has been clearly mentioned that marriages two similar Gotras should be avoided, otherwise it leads to congenital deformities in children. [12]

Ahara of mother during pregnancy

Among 100 mothers, 93% were non vegetarian, 86% were taken snacks like biscuits, cake etc. frequently. 74% had taken egg every day, 43% had meat in every day, and 51% had fish in every day in their Gestational period. When a pregnant woman consumes continuously the diet, capable of aggravating Vata, then causes abnormalities due to Vayu. Many of the food items were dried in nature and are made by frying in oil, which are Vatala in nature, it may lead to Vata prakopa. Some food items are made up of fermented flour and they are Ushnana in Virya, Kaphapitta prakopana, Vidahi and Guru in nature. Fried foods were also Vidahi and Ruksha a in nature. These foods can cause vitiation of Doshas and Muka, Minmina like congenital problems in the progeny [13]

Charaka says that the pregnant woman should avoid excessive use of pungent things. [14] Recent study at Qatar University reveals that consuming more than 50 gm. of spice per day may increase the risk of cognitive function. Consumption of spicy food during pregnancy can lead to miscarriage and congenital disabilities

Accustomed position during pregnancy

21% of the mothers sat in abnormal position always and 45% were occasionally sat in abnormal position for a long-time during pregnancy. This was happened due to the lack of awareness about the importance of maintaining normal positions in pregnancy. Abnormal position may lead to umbilical cord around the neck of the fetus and troubles it in the intranatal and perinatal periods

Suppression of urges during pregnancy

According to Charaka and Vaghbhada the suppression of urges may lead to severe health problems in both mother and child like intrauterine death, improper nutrition which in turn causes many congenital anomalies. Bhela also has enumerated, Beeja dosha of father and mother, absence of use of beneficial Rasas, suppression of natural urges and yoni dosha as causative factor for both infertility and teratologic abnormalities. [15] Due to the suppression of urges the Vata will vitiated and cause defects in progeny. Proving this, 71% of my respondents occasionally suppressed the natural urges like urine, defecation, and flatus.

Strenuous works during pregnancy

32% of the respondents has underwent strenuous works occasionally and 44% of the participants has underwent trauma and compression in lower abdomen occasionally during pregnancy. Charaka says that pregnant woman should avoid excessive exercise or violent activities which may lead to problems in both mother and offspring. [16] A woman's body undergoes many changes due hormonal effects during pregnancy to support the uterus. Hormonal action loosens up ligaments, and increases the volume of the chest and abdominal cavity.

Travelling by jerky vehicles during Pregnancy

The change in the social fabric has also urged female population to undertake strenuous and prolonged journey. Most of these situations cited have been principally implicated in vaigunya of Apanavayu. The manifestation of Apana vayu vaigunya varies from mild cases of constipation to severe cases of mental disturbances. One of the prominent factors highlighted as cause of Apana vaigunya is Atiyana.

Listening of unpleasant words/abuse during Pregnancy

Child recognizes voice at around week 18 of pregnancy and at 26 weeks baby will react to noises both inside and outside the mother's body and may be soothed by the sound of mother's voice. Hearing unpleasant word will transmit a negative energy and will affect the child which may become an envious anti-social element when born. Maternal stress susceptibility interacts with prenatal stress exposure to affect offspring's neuro development.

Psychological stress during pregnancy has an important role in developing behavioral and developmental outcomes in humans. 72% of the mothers of the studied population had an experience of exposure to quarrels and unpleasant words during pregnancy.

Sleep disturbance during pregnancy

Sukha and Dukha, Puṣti and karsya, Bala and Abala, Vrishata and Klibata depend upon sleep. So proper sleep is needed for good health. If the biological clock does not work well without proper rest i.e. the hormone function will not properly work. Sleep problems and changes in sleep patterns start during the first trimester of pregnancy. Most likely influenced by the rapid changes in reproductive hormones levels. Levels of the progesterone rise throughout pregnancy. Insomnia can also negatively impact partner relationship and interfere with mother infant bonding. 66% of the respondents had experienced reduced sleep during their pregnancy

Habit of day sleep during pregnancy

According to Acharya Susrutha, Divasvapna cause Tridoakopan but in Acharya Vaghbata says Divaswapna aggravates Kapha doṣa. So, the day sleep is not beneficial for good health. If the mother having a habit of day sleeps for long time, the child may be oversleepy, ignorant and possess less digestive fire after delivery. These symptoms are seen which is also similarly noted in some classifications of ASD. 71% respondents had experienced day sleep during their pregnancy

The history of fasting, Skipping meals during pregnancy

Exposure to restricted or suboptimal diet during pregnancy affects fetal development and has lifelong health impacts on the offspring. Low birth weight and altered neonatal growth trajectories are associated with increased risk of obesity and impaired cognitive functions in the children.

CONCLUSION

Ayurveda classics beautifully elaborated the Garbhapoorna paricharya and Garbhini paricharya. These are detailed in terms of Ahara Viharas, the dos and don'ts, importance of good mental health during conception and pregnancy, the ill effects of those not following these regimen in the progeny were also described. Among the 100 mothers more than 70% were followed inappropriate food items during pregnancy. Above 65% of respondents were always followed inappropriate regimens during the period of pregnancy. By the Linear Regression one can predict the susceptible to develop Autism. So Ahara Vihara of mother during pregnancy has significant role in developing Autism Spectrum Disorders. Proper education before conception especially regarding dos and donts regarding Ahara Vihara and taking preconceptional care is the need of the era to confirm the quality of sperm and ovum before conception to pursue a healthy and good progeny.



REFERENCE

1. Gillott A, Furniss F, Walter A. Anxiety in high-functioning children with autism. 2001 Sep; 5(3):277-86.
2. Sharma BD, Chouhan K. Prevention & Management of Autism—An Ayurvedic Perspective. Journal of Research In Traditional Medicine. 2016;2(4):117-21.
3. Newschaffer CJ, Falb MD, Gurney JG. National autism prevalence trends from United States special education data, Pediatrics. 2005; 115 (3):e277-82.
4. Susrutasamhita of Maharsi-Susruta, Edited With Ayurveda-Tatva-Sandipika, Hindi Commentary, Scientific Analysis, Notes Etc, By Kaviraja Ambikadutta Shastri, A.M.S., Foreword By Dr. Pranajivana Manekchanda Mehta, Part-I, Chaukhamba Sanskrit Sansthan, Varansi, Sharirsthan 3/13 pg.no.30.
5. Susrutasamhita of Maharsi-Susruta, Edited With Ayurveda-Tatva-Sandipika, Hindi Commentary, Scientific Analysis, Notes Etc., By Kaviraja Ambikadutta Shastri, A.M.S., Foreword By Dr. Pranajivana Manekchanda Mehta, Part-I, Chaukhamba Sanskrit Sansthan, Varansi, Sharirsthan 10/3-4, pg.no.98-99.
6. Caraka Samhitā by Agniveśa edited by Vaidya Yadavji Trikamji Acarya, 2nd edition. Krishnadas Academy; 2000, Varanasi:Nidana sthana 7/7, pg.no.223.
7. American Psychiatric Association. Diagnostic Criteria from DSM-IV-TR. Washington. 2000; DC 2: 28. Effectiveness of a Parental Education Programme on Ayurvedic Lifestyle in Autism Spectrum Disorders Page 122 of 135
8. Robinson EB, Koenen KC, McCormick MC, Munir K, Hallett V, Happé F et al. A multivariate twin study of autistic traits in 12-year-olds: Testing the fractionable autism triad hypothesis. *Behav Genet.* 2012; 42(2):p245-255.
9. Marissa D. King, Christine Fountain, Estimated Autism risk and Older reproductive Age, *American Journal of Public Health*, 2009 Sep 99(9):1673-1679
10. C. Gallagher, F.P. McCarthy, Maternal Alcohol Consumption during pregnancy and the risk of Autism Spectrum Disorders in Offspring; A retrospective analysis of the millennium Cohort study, *Journal Of Autism and Development Disorders*, 2018 Jun 13;48(11):3773-3782
11. Acharya JT, editor. Sharira sthana. 1st ed. Vol. 3. ayurvediya granthamala Chaukhamba Surbharti Prakashana; 1994. Sushruta, Sushruta Samhita of Sushruta with Nibandhasangraha Commentary of Shri Dalhanacharya; pp. 272-3.19-28
12. Sharma PV Prof., editor. 9th ed. 2. Vol. 2. Chaukhamba Orientalia; 2004 Agnivesha. Charaka Samhita, Shrira sthana; p.412.
13. Tiwari, P. 1999. Ayurvediya Prasuti-tantra and Stri-Roga, 1st Part. 2nd edition, Varanasi: Chaukhamba Orientalia.
14. Caraka Samhitā by Agniveśa edited by Prof Sharma PV, 2nd edition., Chaukhamba Orientalia; 2004 Varanasi: Sutrasthana ; 25/40 p. 412
15. Bhela Samhita, text book with English Translation, Commentary and Critical notes by Dr. K.H Krishnamurthi editor by Prof. Priya Vrat Sharma, Chaukhamba VisvaBharathi, Varansi, Reprint:2008, Shareera Sthana 6/242.
16. Charaka – Samhita of Agnivesa Elaborated By Charaka & Drudhabala With The Ayurvedadipika Commentary By Sri Cakrapanidatta Edited By Vaidya Yadavaji Trikamji Acharya Prolongued By Prof. R.H. Singh, Chaukhamba Surbharti Prakashan, Varansi, Edn 2014, Sharirsthan 4/18 p no.320



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"A CLINICAL STUDY TO EVALUATE THE EFFICACY OF YASTIMADHU CHOORNA IN ENHANCEMENT OF IQ IN SCHOOL GOING CHILDREN "

Abstract

Introduction :Intelligence is a vital essentiality in day today life in its purest and enriched form, especially in children who have to build up their life in an appropriate manner. Individuals with high level of intellectual power are inevitable for the current competitive era. Acharya Charaka highlighted four medya rasayanas in chikthsa sthana, one among them is Yastimadhu choorna with milk. which is recommended to improve the medya (IQ) **Aim :**To evaluate the efficacy of Yastimadhu choorna in enhancement of IQ in school going children **Materials and Methods:** The study was contacted in a group of 40 healthy children aged 10-12 years .It was Randomized, Single Centre, Single-blind, Fixed Dose, Parallel Group, and Placebo-Controlled Study .40 children were selected for the clinical study and assigned into 2 groups.Yastimadhu choorna with Milk was given to group A and wheat flour and Milk was given to group B. It was given for a period of three month Final review was completed at a gap of 1 month after stopping the treatment for follow up study. IQ assessment was done before the treatment after the treatment and after the follow up.**Result:** Comparison of two groups after treatment shows that Yastimadhu choorna was effective compare to the placebo but after follow up effect of Yastimadhu choornain to improve IQ is insignificant. **Conclusion :** Yastimadhu choorna was safe throughout the course of study and shows significant efficacy in improving IQ at the time of treatment

Key Word:School Children, IQ, Yastimadhu Choorna, Buddhi, Medha, Smruthi, Memory

Introduction

Current competitive era demands individual with high level intelligence especially in children, because pace of life got increased and the human beings have become accustomed to a competitive world. The competition spirit is being injected by the society even to the brain of infants and children.

Intelligence is the quality and ability of mind that encompasses many related abilities, such as the capacity to reason, to plan, to solve problems, to think abstractly, to comprehend ideas, to use language, and to learn. When we consider the word Buddhi from our classics its says that buddhi is a higher mental faculty, i.e.the one which is act as instrument of knowledge, decision maker, discriminating authority etc However, Buddhi is a higher faculty that acts in sense percepts organized by manas and furnishes intellectual discrimination, determination, reasoning, and will.

In our classics lots of importance has been given for the concept of Medhya rasayana. According to Amarakosha, the word Medha means the ability to have proper correlation and understanding about the knowledge of the existing object¹, means the word medha represent the buddhi itself. Rasayana which help to increase medha, is called as medya rasayana. Acharya Charaka highlighted four medya rasayanas in chikthsa sthan². One among them is yastimadhu choorna with milk³, our acharyas had well praised the drug by indicating it to increase medha, smruthi and to boost the individual shruthadha.

To measure the intelligence there are so many methods are available , the most famous of which is the IQ test. Intelligence tests are a standardized assessment procedure for the determination of intellectual ability. The score

produced is usually expressed as an intelligence quotient. Most tests present a series of different kinds of problem to be solved.

Intelligent quotient (IQ) is an index of intellectual development. In childhood and adult life.

Materials and Methods

Healthy Children aged 10-12 yrs irrespective of sex, caste, religion, and socio-economical status were selected from the Alvas school Moodbidri. The study was started after obtaining the consent of the patients. The written consent was detailed in the local language and explained orally too regarding the type and course of study. The clinical study was started after the approval of Institutional Ethics Committee.

Inclusion criteria

Children aged 10-12 yrs irrespective of sex, caste, religion, and socio-economical status and whose IQ score ranged from 70 to 139 were selected.

Exclusion criteria

Children suffering from any systemic disorders, whose IQ score ranged below 70 and Children aged below 10 yrs and above 12 yrs.

Grouping of Children and Posology

The selected children were randomly divided by applying lottery method into the following two groups of treatment.

Treatment Group (Group A) This group containing 20 children was administered Yastimadhu churna with milk in the dosage of 300mg in morning before food for a period of three months.

Placebo Group (Group B) This group of 20 children was given the placebo made up of fried wheat churna with milk in the dosage of 300mg in morning before food for a period of three months. The selected children were treated with the test drug or placebo for a period of three months. One month after stoppage of the treatment; the children were again assessed for follow up study.

Assessment criteria

The Indian adaptation of Wechsler Intelligence Scale for Children i.e. Malin's intelligence scale for Indian children has been used for the present study and Scores obtained in each item from the score table was considered as the individual criteria. The test contains verbal and performance scale, which further contains 5 sub tests in each of them.

General Description:

The original WISC is an individual intelligence test or scale for children from the ages of 5 to 15.11 years. The Indian adaptation covers only ten years from 6 to 15.11. The Indian adaptation omits the picture arrangement test in performance scale as it proves too culturally biased both as to content as well as form.

VERBAL	PERFORMANCE
General information	Picture completion
General comprehension	Block design
Arithmetic	Object assembly
Similarities	Coding
Digit span	Mazes
Vocabulary	Picture arrangement

These subtests may be administered in any order convenient for rapport. Only ten tests 5 from each group are required for completed scoring. In case more or fewer tests are taken appropriate score pro-rating is called for. The verbal group has an alternate in digit span test in case of spoilage or when the regional vernacular test drops the vocabulary test in upper levels.

Observation

Response of children on VERBAL IQ test in Group A and Group B Before treatment

CATEGORY	SCORE RANGE	Group A		Group B	
		NO	%	NO	%
Dull	70-89	3	7.5	6	15
Average	90-109	15	37.5	14	35
Superior	110-124	2	5	0	0

In Group A Before treatment (BT) there were no children whose verbal IQ score was below 70 who belonged to Retarded category, 7.5% children belonged to Dull IQ category & 37.5% children belonged to Average IQ category and 5% children were in the superior IQ category.

In Group B there were no children in both retarded and Superior category. 15% of the children's were in dull category and 35% of the children's were in Average category.

CATEGORY	SCORE RANGE	Group A		Group B	
		NO	%	NO	%
Dull	70-89	0	0	0	0
Average	90-109	13	32.5	9	22.5
Superior	110-124	7	17.5	10	25
Very superior	125-139	0	0	1	2.5

In Group A before treatment (BT) there were no children belonging to Dull IQ category, 65% children belonged to the Average IQ category & 35% children belonged to the Superior IQ category group.

In Group B there were no children in Dull category 22.5% of the children's were in average category, 25% in superior and 2.5% in very superior.

Response of children in Group A on OVERALL IQ SCORE Before treatment

Response of children on PERFORMANCE IQ TEST in Group A and Group B Before treatment

CATEGORY	SCORE RANGE	BT	
		NO	%
Dull	70-89	2	10
Average	90-109	12	60
Superior	110-124	6	30
Very superior	125-139	0	0

Before treatment- 10% children were in the category of dull IQ score

60% children were in the category of average IQ score

30% children were in the category of superior IQ score

Response of children in Group B ON OVERALL IQ SCORE Before treatment

CATEGORY	SCORE RANGE	BT	
		NO	%
Dull	70-89	1	5-
Average	90-109	17	85
Superior	110-124	2	10
Very superior	125-139	0	0

Before treatment- 5% children were in the category of dull IQ score

85% children were in the category of average IQ score

10% children were in the category of superior IQ score

RESULTS

Effect of Yastimadhu Choorna on VERBAL and Performance IQ Before treatment and After treatment on GROUP A

IQ	Mean score		%	SD	SE	T	P	REMARKS
	BT	AT						
Verbal	98.610	98.820	0.21	0.4252	0.09512	2.814	P<0.01	S
Performance	106.55	116.85	8.8	0.5458	0.1220	2.693	P<0.01	S

There was 0.21% improvement in verbal IQ and 8.8% improvement in performance IQ after treatment. The effect of the trial drug was significant with a p value <0.01.

Effect of Yastimadhu Choorna on VERBAL and Performance IQ Before treatment and After follow-up on GROUP A

IQ	Mean score		%	SD	SE	T	P	REMARKS
	BT	AFU						
Verbal	98.610	98.810	0.20	0.3179	0.07108	2.208	P<0.02	S
Performance	106.55	106.05	0.47	0.8303	0.1857	2.458	P<0.02	S

There was 0.20% improvement in verbal IQ and 0.47% improvement in performance IQ during follow-up with a statistical significant P value of <0.02

Effect of Placebo on VERBAL and Performance IQ before treatment and After treatment on children of GROUP B

IQ	Mean score		%	SD	SE	T	P	REMARKS
	BT	AT						
Verbal	93.210	93.415	0.21	2.713	0.6066	0.3379	P<0.25	NS
Performance	108.55	108.06	0.45	2.713	0.6067	0.8160	P<0.20	NS

The effect of placebo on verbal and performance IQ was statistically insignificant with a P value of <0.25.

Effect of Placebo on VERBAL and Performance IQ before treatment and after follow-up on children of GROUP B

IQ	Mean score		%	SD	SE	T	P	REMARKS
	BT	AFU						
Verbal	93.210	93.255	0.04	2.848	0.6367	0.0706	P<0.25	NS
Performance	108.55	108.19	0.33	3.410	0.7626	0.4787	P<0.25	NS

The effect of the placebo continued to be statistically insignificant on verbal and performance with a P value of <0.25.

Effect of Yastimadhu Choorna on overall IQ Before treatment and After treatment on children of GROUP A

IQ	Mean score		%	SD	SE	T	P	REMARKS
	BT	AT						
Overall IQ	102.58	102.83	0.9	0.296	0.0658	3.870	P<0.001	S

The trial drug yastimadhu choorna was highly significant on overall improvement of IQ after treatment with a P value <0.001.

Effect of Yastimadhu Choorna on overall IQ Before treatment and After follow-up on children of GROUP A

IQ	Mean score		%	SD	SE	T	P	REMARKS
	BT	AFU						
Overall IQ	102.58	102.43	0.14	0.4344	0.4344	1.544	P<0.10	NS

The trial drug yastimadhu choorna was not significant during follow-up with insignificant P value of <0.10.

Effect of Placebo on overall IQ Before treatment and After treatment on children of GROUP B

IQ	Mean score		%	SD	SE	T	P	REMARKS
	BT	AT						
Overall IQ	100.88	100.74	0.13	0.5010	0.1120	1.294	P<0.15	NS

The effect of placebo was not significant on overall improvement of IQ after treatment with a insignificant P value of <0.15

Effect of Placebo on overall IQ Before treatment and After Follow-up on children of GROUP B

IQ	Mean score		%	SD	SE	T	P	REMARKS
	BT	AFU						
Overall IQ	100.88	100.72	0.15	0.6064	0.1444	1.108	P<0.15	NS

The effect of placebo continued to be insignificant on overall IQ improvement after follow-up with a insignificant P value of <0.15

COMPARISON OF RESULTS OF TWO GROUPS ON OVERALL IQ SCORE (T- Test)
After Treatment & After Follows Up

Overall IQ	Mean \pm SEM		TVALUE	P VALUE	REMARKS
	GROUP A	GROUP B			
AT	0.255 \pm 0.0874	0.145 \pm 0.112	2.815	P<0.005	S
AFU	0.150 \pm 0.928	0.160 \pm 0.114	0.05825	P<0.25	NS

Comparison of two groups after treatment shows a p value <0.005, which indicate that yastimadhu choorna was effective compare to the placebo.

Comparison of two groups after follow up shows a p value <0.25, which indicate that effect of yastimadhu choorna and placebo were insignificant.

Discussion

A methodical review on functional aspects of Ayurvedic concepts like buddhi, medha, smruthi modern topics like intelligence, intelligent quotient, memory their physiological basis and factors affecting them was done. These factors were analyzed consecutively and grouped into four categories mainly biological, psychological, social, and familial factors. IQ was assessed with the help of Indian adaptation of Wechsler intelligence scale of children i.e. Malin's intelligence scale for Indian children. Verbal IQ scale measured child's general knowledge, factual knowledge, long term memory, social and practical judgment, short term auditory memory, concentration numerical reasoning, etc. Performance IQ scale measured attention power, alertness to visual details and visual discrimination, visual-motor skills, coordination, short term visual memory, nonverbal intelligence, spatial analysis, grapho-motor planning, fine visual-motor coordination, etc. Entities measured by verbal and performance IQ scale can be considered as functional aspects of Medha and Smruthi. Trends and techniques in modern day clinical researches have been used in applicable places to make the study up to standard more scientifically. It can be concluded that quality of memory depends on the strength of attention, the extent of motivation, the adequacy of processing of the information to be stored, the frequency of exposure and the techniques used to register and to retrieve data. Yastimadhu Choorna was found to be highly effective in improving Verbal IQ (0.21%), Performance IQ (8.8%) and Overall IQ (0.9%) in children of Group A after treatment and the efficacy of medicine was sustained even after follow up period where Verbal IQ showed a improvement of 0.20%, Performance IQ showed a improvement of 0.47% and in Overall IQ there was a improvement of 0.14%. Statistical results on efficacy of Yastimadhu on verbal and performance IQ after treatment showed a p value of <0.01 and overall IQ after treatment showed a p value of <0.02.

Comparison of two groups after treatment shows a p value <0.005, which indicate that Yastimadhu choorna was effective compare to the placebo. Comparison of two groups after follow up shows a p value <0.25, which indicate that effect of Yastimadhu choorna and placebo were insignificant.

Conclusion

All the 40 children completed the course of treatment without any drop out. Medication was well tolerated by the children without any untoward reactions. The present study was done on minimum sample size. The efficacy of trial drug Yastimadhu choorna on a larger population will be helpful in standardizing the drug and yield a significant statistical result. Assessment of buddhi, medha & smruthi on standard parameters in Ayurvedic methods would be more helpful to evaluate the efficacy of Ayurvedic drugs or compounds. Evaluating the efficacy of Yastimadhu Choorna on non-schooling children in future, days can be suggested. As the trial drug Yastimadhu choorna showed significant results in enhancing IQ of the normal children, further study is encouraged in the mentally retarded category.

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Conflicts of interest

There are no conflicts of interest

1. Amara Sinha - 'Amarakosha' Amarakosha-1/5, Ed. By Shiva data, Nirnaya Sagar Press, Bombay
2. Agnivesa, Charaka Samhita, Chakrapanidatta, , Editor Dr. Ram Karan Sharma and Vaidya Bhagawan Dash, Chowkhamba Sanskrit Series Office, Varanasi, Reprinted in 1998, Cikitsa Sthana 1:3/30-32, Page no. 46.
3. Arunadatta - 'Sarvanga sundara' commentary on 'Astanga Hrdaya' Ed. by Vaidya H.P, Chaukhamba Oreintalia, Banaras
4. Bhagavadgita 2/46
5. Ayurveda tatva sandepika
6. Binet, A. (1905). "" . Readings in the History of Psychology. New York: Appleton-Century-Crofts.

Wechsler, D

7. (1944). The measurement of adult intelligence. Baltimore: Williams & Wilkins. [ISBN 0195022963](#)
8. Burt, C. (1931). "The Differentiation of Intellectual Ability". The British Journal of Educational Psychology
9. Gardner, Howard (1993). Frames of mind: The theory of multiple intelligences. New York: Basic Books. [ISBN 0465025102](#)

Gottfredson, L

10. (1998). ["The General Intelligence Factor"](#) Pg.no. 24-29

Sternberg, R, J

11. Salter W (1982). Handbook of human intelligence. Cambridge, UK: Cambridge University Press. [ISBN 0521296870](#).

12. Gardner, Howard (1993). Frames of mind: The theory of multiple intelligences. New York: Basic Books. [ISBN 0465025102](#)

13. Thurstone, L. L. (1938). Primary mental abilities. Chicago: University of Chicago.

14. Spearman, C. (1927). The abilities of man: Their nature and measurement. Oxford, England: Macmillan. [ISBN 978-0404061746](#)

al, 4th edition, Published by Jaypee Brothers medical publishers (P) LTD. New Delhi. Reprinted in India 2009



- 15.Indiana University (2007). "[William Stern](#)". [Indiana University](#).
16. Plomin, N. L. Pedersen, P. Lichtenstein and G. E. McLaren (May 1994). "[Variability and stability in cognitive abilities are largely genetic later in life](#)." *Behaviour Genetics* 24(3):207
17. Chakrapani - 'Ayurveda Deepika', Ed. By Acarya Y.T, Munsiram Monoharlal Publishers Pvt. Ltd. N.Delhi.
18. Charaka Samhita - English translation by Sharma R.K. and Vd. Bhagavan Dash.
19. Susruta- Susruta Samhita with Nibandha Sangraha commentary of Dalhanacharya, edited by Vaidya Yadavaji Trikamji Acharya, Published by Chaukambha Surabharati Prakashan, Varanasi.
20. Kashyapa Samhita - Hindi commentary by Satyapala Bhishagacharya, Chaukhamba Sanskrit Samsthan, Varanasi.
21. Vaghabhata, Astanga Hridayam commented by Arunadatta and Hemadri, Krishnadas Academy, Oriental Publishers, 1995
22. Indu - 'Astanga Samgraha with Shashilekha teeka' Ed. By Ramachandra Shastri.
23. Madhava - 'Madhava Nidana' with 'Madhukosa' commentary by Vijayarakshita and Srikantha Datta with 'Vidyotini' Hindi commentary by Shastri S., Chaukhamba Sanskrit Samsthan, Varanasi.
24. Baladeva Upadhyaya - 'Bharatiya darshan' published by Sarada mandir, Varanasi, 1997.
25. IAP-Textbook of paediatrics, A Parthasarathy, et



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A REVIEW ON SUTIKA PARICHARYA AND CLINICAL SIGNIFICANCE

ABSTRACT:

Sutikavastha, though not a stage of illness, the puerperal woman will have Sarva Sareera Dhatu Shithilata, and Shunya Shareerata due to Garbhaviddhi-Kshapana and Kleda-Rakta Nisruti following delivery. Considering that the dhatus are in a condition of Shithilavastha, this period is especially vulnerable to considerable morbidity, both physically and psychological, if not provided with adequate care. In accordance with the fundamental tenet of Ayurveda, which states, "Swasthasya Swaasthya Rakshanam, Aaturasya Vikaaraprasamanam," the Acharyas have delineated the concept of 'Sutika Paricharya.' This approach encompasses the prescription and restriction of various internal and external interventions for the postpartum period, with the objective of facilitating the transition from the physiological changes associated with pregnancy back to the pre-pregnancy state. The elucidation of the scientific foundation of Sutika Paricharya encompasses its functions in restoring Dhatu-Paripurnatwam, achieving Garbhasaya Shuddhi, facilitating Stanya Utpatti, and ensuring Stanya Sampat. It also encompasses Punarnaveekarana, which refers to the restoration of the anatomical state prior to pregnancy, achieved through Kukshi Hrasa and Yoni-Gadheekarana. A precise administration of Sutika Paricharya in accordance with the Desha ensures a healthy puerperal period.

KEYWORDS: Sutika Paricharya, Dhatu-Paripurnatwam, Garbhasaya Shuddhi, Punarnaveekarana

INTRODUCTION

Puerperium is the postpartum period that extends up to six weeks from the delivery of the placenta. During this period, there are two significant physiological phenomena. Initiation of lactation and the reversion of the physiological changes associated with pregnancy back to the pre-pregnant status. The alterations in the organs are quite rapid during the first two weeks after childbirth, but some will take 6–12 weeks to complete. For the mother and her infant, it is an extremely significant period. Even though majority of mothers express their delight at the arrival of an infant, it is also a period of psychological adjustment because of the transition to parental responsibility and the concern regarding the well-being of baby will affect their capacity to manage. These anxieties may be exacerbated if she experiences any medical complications or is fatigued following her labour. Puerperal period is crucial and has to be taken diligent care because of the metabolic alterations of pregnancy getting reversed, and lactation is getting established during this period.

Sutika Paricharya mentioned in ayurveda, the regimen to be followed during Sutika Kala has the potential to back up the healthy transition from to a pre-pregnant status. As per ayurveda the puerperal woman will experience Sarva Sareera Dhatu Shithilata and Shunya Shareerata because of Garbhaviddhi-Kshapana and Kleda-Rakta Nisruti following delivery, even though sutikavastha is not a stage of illness. Given that the dhatus are in a state of Shithilavastha, this period is particularly susceptible to significant morbidity, both physiologically and psychologically, if proper care is not provided. The current article reviews various aspects of Sutika Paricharya mentioned in ayurveda literatures.

OBJECTIVES

- To review Sutika Paricharya according to different Samhitas
- To analyse the clinical significance of Sutika Paricharya

MATERIALS AND METHODS

All the information about definition of Sutika, Sutika Kala according to different acharyas, and the regimen mentioned in terms of diet, medicines and lifestyle was gathered from Ayurvedic classical and compiled

RESULTS

Definition of Sutika: The woman after child-birth, followed by the expulsion of the placenta, is referred to as Sutika

Sutika Kala [1,2,3,4]

The puerperal stage, as delineated in Ayurvedic texts, lasts for one and a half months following the delivery of the infant, after the removal of the placenta. However, in cases of Mudha-Garbha, a four-month duration may be regarded as Sutika Kala. Acharya Charaka has not provided any precise period or regimen for the care of Sutika. Acharya Sushruta and Acharya Vagbhata have delineated the duration of Sutika Kala as one and a half months, or until the onset of the first menstrual cycle post-labor. Kashyapa has stated that the Sutika Kala lasts six months, since all the Dhatus will revert to their pre-pregnant status only by this duration.

Sutika Paricharya in different classics:

CHARAKA SAMHITA

Ahara: The puerperal woman should consume any one of Chatursnehapana with Panchakolachurna or Yavagupana medicated with Pippalyadi.

Vihara: Udara Abhyanga with Sarpi and Taila, Ushnodaka Parisheka twice a day, and Udara Pattabandhana are recommended.

SUSHRUTA SAMHITA

Ahara: Vatahara Kwatha Pana (decoction that pacifies Vata), Ushna Gudodaka with Pippalyadi Dravyas, Sneha Yavagu/Ksheera Yavagu medicated with Vidarigandhadi

Gana Dravyas, Jangala Mamsarasa, Yava, Kola, Kulatha Yusha along with Shaliodana Bhojana are advised.

Vihara: Sarvadaihika Balataila Abhyanga and Sarvadaihika with Vatahara Oushadha Kashaya are recommended.

ASHTANGA SANGRAHA

Ahara: Snehapana with Panchakola Churna or Yavanyadi Churna, Vatahara/Hraswapanchamoola Kwatha Pana (if Sneha is contraindicated), Vidaryadi Kwathasadhita Snehayavagu/Ksheerayavagu, Yava, Kola, Kulatha Yusha, Laghu Annapana (light food), Jangala Mamsarasa, Jeevaniya Gana/Brihmaniya Gana/Madhura, Vatahara Dravyasadhit Annapana are advised.

Vihara: Sarvadaihika Balataila Abhyanga, Udara Abhyanga, Udara Pattabandhana, Ushnodaka Parisheka twice a day, Udwartana, Parisheka, Avagaha, and Hridya Upachara with Jeevaniya/Brimhaniya/Madhura-Vataharasiddha Taila/Ghrita/Kwatha are recommended.

ASHTANGA HRIDAYA

Ahara: Snehapana with Panchakolachurna with Ushna Gudodaka or Vatahara Aushadha Toya (to be given without adding Sneha, if Sneha is contraindicated), Peya with Panchakola Churna, Vidaryadi Kwathasadhita Snehayavagu/Ksheerayavagu, Jeevaniya Gana/Brihmaniya Gana/Madhuravarga Siddha Hridya Annapana, and Mamsa Prayoga are advised.

Vihara: Yoni Abhyanga, Sarvadaihika Abhyanga, Udara Abhyanga, and Udara Pattabandhana are recommended.

KASHYAPA SAMHITA

Ahara: Manda, Hita - Ashana, Snehapana with Pippali-Nagara-Siddha Yavagu, Alpasneha Yavagu without Lavana in the initial phase, Snehayukta Pippali-Nagara-Siddha Yavagu with Lavana in the latter phase, Kulatha Yusha with Sneha/Lavana/Amla, Jangala Mamsarasa, and Gritha Bhrishta Shakas like Kooshmanda, Moolaka, Ervaruka are advised.

Vihara: Ashwasana by Priyavaadini, Udara Peedana, Udara Pattabandhana, Sadaa Aaseetha Charmaavanaddha Aasandika (always sitting on a leather-covered stool) filled with Bala Taila, Yoni Swedana with Priyanguadi Krisara, Ushnambu Snana, and Yoni Dhoopana (vaginal fumigation) with Kushta-Agaru-Guggulu with Ghrita are recommended.

HARITA SAMHITA

Ahara: Kwatha medicated with Lodhra-Arjuna-Kadamba-Devadaru-Beejaka-Karkandhu, Upavasa on the first day, Guda, Nagara, Haritaki on the second day, Kulatha Yusha on the second day after 2 yamas, Panchakola Yavagu on the third day, Chaturjataka Yavagu on the fourth day, and Shastika Shali Odanam (rice meal) on the fifth day are advised.

Vihara: Yoni Poorana and Abhyanga with Taila, Swedana with Ushna Vaari, and Mangalavachanam are recommended.

BHAVAPRAKASHA

Ahara: Hita Ahara is advised.

Vihara: Hita Vihara are advised, and Vyayama, Maithuna, Krodha, and Sheetasevana should be avoided.

DISCUSSION

Sutika Paricharya encompasses a prescription of Ashwasana, Bahya Prayoga and Antarika Prayogas and a restriction of Vyayama, Maithuna, Krodha and Sheetasevana. Ashwasana is the paramount aspect that stabilises the psychology of the puerpera. Following birth, there will be both physical and psychological exhaustion due to the exertions of labour. The delivery of psychological comfort and counselling is essential in averting puerperal psychological problems, including postpartum blues, depression, and psychosis. Analysis of Bahya Prayogas, encompassing Sthanika and Sarvadaihika Prayogas, underscores the significance of Snehana in Sutika Paricharya. The attributes of Sneha, such as Snigdhatha, Gurutha, Sheetatha, Mridutha, Drvatha, Picchilatha, Saratha, Mandatha, and Sookshmatha, contribute to Dhatuparipoornatwam in Sutika and can mitigate the problems of Kelda-Nisruti. The dominant Agni Mahabhuta in Sookshma Guna might facilitate a healthy metabolism during Sutikavastha, where the status of Agni is initially Manda. Dravyas such as Panchakola facilitate Deepana and Pachana, while also promoting wound healing through their intrinsic anti-inflammatory, antimicrobial, and antioxidant qualities. The Abhyantara Prayogas employed during the initial phase are effective in facilitating the opening of the Srotas, micro-circulatory channels, which could be advantageous in promoting adequate lactation. The inclusion of several herbs in dietary regimens is advised due to their considerable medical and nutritional advantages.

Abhyanga aids in strengthening the musculature of the pelvic floor, abdomen, and back tissues, besides alleviating muscle spasms. Udwartana can facilitate the opening of microcirculatory channels promoting metabolism. Parisheka can act as Vata Hara alleviating the post-partum fatigue. Yonipindana can inhibit the access of Vata into the Garbhasaya, while Yoni Snehana enhances the vagina and perineum, preventing the laxity and prolapse. Yoni Dhoopana utilising pharmacological agents recognised for their antibacterial attributes can mitigate infection risk, as the vaginal defence is compromised due to a hypoestrogenic condition. Udaraveshtana can alleviate Vata Prakopa and facilitate the realignment of dislocated and displaced organs to their pre-pregnant status.

CONCLUSION

In conclusion, Sutikavastha signifies a crucial period for women, marked by physical and psychological vulnerabilities post-partum. Adequate care during this period is essential to prevent morbidity, aligning with the basic principle of Ayurveda that highlights the importance of prevention. The concept of Sutika Paricharya provides a structured approach to support recovery, focusing on restoring bodily functions and achieving a healthy return to the pre-pregnancy status.



REFERENCE

- 1) Kaviraj Ambikadutta Shastri. Susruta Samhita (Shareerasthana). Varanasi; Chaukhamba Sanskrit Sansthan; 2014
- 2) Prof. K.R. Srikantha Murthy. Ashtanga Sangraha (Shareerasthana). Varanasi; Choukhambha Orientalia; 2012
- 3) Prof. K. R. Srikantha Murthy. Vaghbata's Ashtangahrdayam (shareerasthana). Varanasi; choukhambha krishnadas academy; 2000
- 4) Satyapala Bhigacharya. Kashyapa Samhita (Khilsthana.) Varanasi; Chaukhamba Sanskrit Sansthan; 1994
- 5) Yadavaji Trikamaji. Caraka Samhita. Varanasi; Chaukhambha Orientalia, 2001
- 6) Yadavaji Trikamaji. Susruta Samhita. Varanasi; Chaukhambha Orientalia; 2005
- 7) Kashinath Shastri. Asthanga Sangraha. Varanasi; Chaukhambha Orientalia; 2005
- 8) Hari Sadasiva Sastri. Ashtangahrdaya of Vaghbata (Sharira sthana). Varanasi; Chaukhamba Surbharati Prakashan; 2018
- 9) P V Tewari. Kashyapa Samhita. Varanasi; chaukhambha visvabharati; 2013
- 10) Ramavallamba Shastri. Harita Samhita (Hindi. Translation). Varanasi; Prachya prakashana; 1985
- 11) Prof. K.R. Srikantha murthy. Bhavaprakasha of Bhavamishra (Eng. Translation) (Madhya Khanda). Varanasi; Chowkhambha Krishnadas Academy; 2005



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PERSONAL HEALTH OF ADOLESCENTS – CARE AND CONCERN THROUGH AYURVEDIC REGIMEN

Adolescence is the phase of life between childhood and adulthood. It is a unique stage of human development and an important time for laying the foundations of maintaining good health. Unfortunately, majority of the adolescents are failing to meet current nutritional recommendations. Evidences from recent researches show that young people growing up in disadvantaged social circumstances are exposed to higher health risks.

Ayurveda the science of life emphasises the motto of preserving the health (swasthya) of healthy (swastha) and curing the illness (vikara) in diseased (athura). Various regimen (Charya) elaborated in ayurvedic texts focuses on the routine activities to be performed in a day, according to the season, according to the age and strength of an individual. All these regimens are a fundamental way of living and one who adheres to it, is practicing a healthy lifestyle on a daily basis. Such a person can only long for the complete physical, mental and spiritual well-being.

We will go through the transition in diet and regimen occurred with recent decades especially in the adolescent group

Waking up



Considering the time apt for perceiving knowledge, Brahma muhurtha (approximately one and half hours before sunrise), is told to be the best for waking up in case of healthy individuals. Whereas now a days waking up and rushing to routine and school is the common scenario.

Oral hygiene



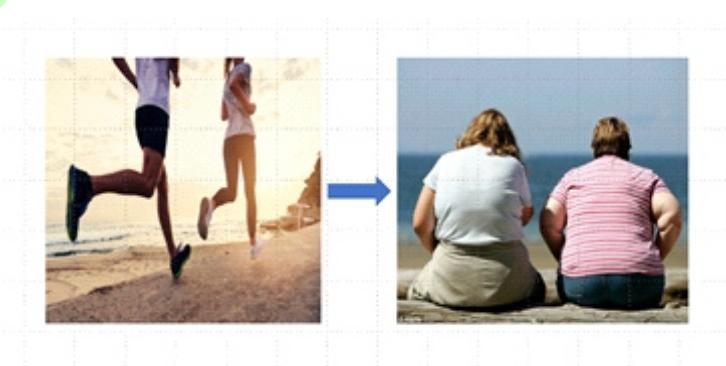
Agni (digestive fire) and digestion is given due importance in Ayurveda while describing the physiological and pathological variations occurring in the body. Oral cavity the area where the prime phase of digestion is initiating, proper maintenance of oral hygiene is also elaborated in regimen. Herbal toothbrushes are told to use for brushing to remove the sludge deposition, better perception of taste and to eliminate bad odour. Inspite of all these, recent study reveals, only two thirds of adolescents brush their teeth twice a day, with prevalence higher among girls than boys and Older boys were less likely to brush their teeth. Ayurveda even insist to do holding of medicated liquid medicine orally (gandusha) which all point towards the care for oral cavity.

Oil application



Abhyanga or oil application is recommended on to body, head, ear and sole, that too on a daily basis which have multiple benefits like overcoming fatigue, retards ageing, provides good sleep, good for eyes, reduce stress etc. It can be routinely performed before bath or in some cases after bath or condition specific. Type of oil used for abhyanga also is dependent on body constitution and nature of disease if any. Likewise head and body bath on daily basis is also told to be beneficial for health and it is specified to use warm water for body bath and cold water for head. Now a days routine oil bath is diminishing especially among the adolescent group.

Physical exercise



Regular practice of vyayama (exercise) renders helps in burning excess fat, improves digestive capacity, makes body light thereby making the person efficient in activities. It is told to strong individuals who are habituated to fat rich diet, to routinely practice exercise considering the seasons and gentle massage to be done to body after the exercise. Ayurveda clearly states about the group contraindicated in doing exercise which include children, those who suffering from certain diseases etc. Also the after effect of indulging in excessive exercise without considering one's own strength is being elaborated. Considering the present scenario lack of exercise and excess exercise - both are alarmingly increasing where ayurvedic regimen marks the importance.

Eating Habits



Ayurveda recommends to fill the stomach to its three fourth only so that quarter portion should be remained empty which aids in digestion, enhances peristalsis and helps in proper evacuation of bowel. This should be strictly to be taken into consideration in this era where excess eating is a serious concern. Elaborate explanations are given regarding the quantity and quality of food to be taken and what not to be taken. Food shall be consumed only once the previously ingested meal is digested and the food should be wholesome (adequate nutrients) with adequate amount of water (carbonated drinks to be avoided) intake and incompatible (category of junk foods can be taken here) food should be avoided. Over weight and under weight is an area of concern in adolescence, where untimely eating habits, lack of family meals, increased consumption of junk foods and carbonated drinks are found to be more in adolescents.

Social interaction and communication



Excessive usage of social media results in reduced family time and other activities together. Surveys state that majority of adolescents prefers online communication rather than face to face conversation which is more common in girls than boys. Also the reduced family interaction between parents and children is also alarming. These may result in chances of developing socialisation issues, and more chances of getting into deranged mental state, depression etc. Ayurveda emphasises the importance of manas (mind) and importance of meditation (dhyana) in achieving a healthy life which is very essential to make children aware right from the school age.

Code of conduct and behaviour

Ayurveda elaborates many sins which shouldn't be committed by anyone which includes violence, theft, infidelity, calumny, abusal, lying/ speaking lie, using rubbish words, tendency to harm, longing for others belongings etc. Behavioural aspects and moral correction should be prioritized by parents and teachers from the very young age itself to raise responsible and truthful future generation. Substance abuse, drug usage, sexual abuse etc which are



dangerously coming up irrespective of gender among the adolescent group also can be tackled to a limit by framing up a clean and modest character from the very young age itself.

Seasonal regimen

Rithucharya or the seasonal regimen is very important as ayurveda mentions 6 rithus in a year with varying qualities of environment and body. so adhering to specific diet and regimen prescribed for each rithu should be judiciously followed. Otherwise there are chances of getting various diseases due to alteration in immune functions due to weakened body strength.

So it is the duty of family members to follow a healthy lifestyle at home including the ayurvedic regimen in daily life so that the growing children wouldn't deviate from those and will come to know the importance of practising a routine disciplined life for a healthy body and mind.

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