



PARENTAL SEASONAL REGIMEN AND THEIR IMPACT IN PREVALENCE OF CANCER: A SYSTEMATIC REVIEW

Ayurveda

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ABSTRACT

The effect of harmful diet as well as activities of the mother causes congenital anomalies. The psychology of pregnant woman may also affect the foetus growth in her womb. *Vedas* considered the fact that for achievement of conception, happiness and good psychology of woman is an important factor [1]. The period of pregnancy and the intrauterine environment are crucial to the tendency to develop diseases like Cancer, hypertension, diabetes etc. Similarly, the maternal lifestyle, particularly diet, exercise and smoking during pregnancy, have an important role in determining the risk to develop diseases that manifest themselves both during childhood and particularly in adulthood [2]. Maternal behaviour during early periods of life can alter the epigenetic state of the foetal DNA. Maternal stress and maternal-placental-foetal biological mediators of stress can affect foetal development. In fact, it has been showed that exposure to maternal psychosocial stress during intrauterine life is associated with significantly shorter leukocyte telomere length in young adulthood, a predictor of disease onset and mortality. The present literary / conceptual study thus focuses mainly on interpreting these reviews, on the basis of modern scientific knowledge and intervention of personalised *Dinacharya* & *Ritucharya* to prevent prevalence of cancer.

KEYWORDS

Dinacharya, Ritucharya, Cancer, etc

INTRODUCTION:

Ayurveda, the age-old science of life, has always emphasized to maintain the health and prevent the diseases by following proper diet and lifestyle regimen rather than treatment and cure of the diseases. The basic principle followed in the *Ayurvedic* system of medicine is '*Swasthyashya Swasthya Rakshanam*', which means to maintain the health of the healthy, rather than '*Aturashya Vikara Prashamanancha*', means to cure the diseases of the diseased.[3] For this purpose the personalized *Dinacharya* (daily regimen) and *Ritucharya* (seasonal regimen) have been mentioned in the classics of *Ayurveda*. [4]

With the change in season, the change is very evident in the environment we live in. We see various changes in bio life around us, such as flowering in spring and leaf shedding in autumn in the plants, hibernation of many animals with the coming of winter, and so on. As human being is also part of the same ecology, the body is greatly influenced by external environment. Many of the exogenous and endogenous rhythm have specific phase relationship with each other; which means that they interact and synchronize each other. If body is unable to adopt itself to stressors due to changes in specific traits of seasons, it may lead to *Dosha-vaishamya*, which in turn may render the body highly susceptible to one or other kinds of disorders.[5]

As adaptations according to the changes, is the key for survival, the knowledge of *Ritucharya* (regimen for various seasons) is thus important. People do not know or ignore the suitable types of food stuffs, dressing, and others regimen to be followed in particular season, this leads to derangement of homeostasis and causes various diseases, such as **cancer**, obesity, diabetes, hypertension, and so on. Lifestyle diseases are a result of an inappropriate relationship of people with their environment. Onset of these lifestyle diseases is insidious, delayed development, and difficult to cure. [6]

The World Health Organization has identified India as one of the nations that is going to have most of the lifestyle disorders in the near future. Nowadays, not only are lifestyle disorders becoming more common, but they are also affecting younger population.[7]

Ritucharya is prominently discussed in the first few chapters of most of the Samhitas of *Ayurveda*. Prevention of disease to maintain health is being the first and foremost aim of the holistic science of *Ayurveda*. In *Tasyashitya* chapter of *Charaka Samhita*, it is said "*Tasya Shitadiya Ahaarbalam Varnascha Vardhate. Tasyartusatmayam Vaditam Chestaharyyapasrayam*," which means the strength and complexion of the person knowing the suitable diet and regimen for every season and practicing accordingly are enhanced.[8] Main theme of this chapter is to make people aware concerning the methods to live in accordance with the environment.

Scholars of *Ayurveda* system of medicine were much aware about the maintenance of health of healthy person which is also the primary objective of *Ayurveda*, secondary being to cure the diseased individual. Lifestyle diseases are potentially preventable with changes in the diet, daily routine and environment. Some studies have been also being conducted on lifestyle interventions for management and prevention of these diseases with satisfactory results. [9]

Aim and Objectives:

- To study and see the relation of impact of personalised *Dinacharya* and *Ritucharya* in prevalence of cancer.
- To study the *Ayurvedic* principles and formulations for reducing the risk of cancer.
- To suggest a protocol for prevention of prevalence of cancer.

Material and Methods:

- Classical literature of *Ayurveda* as well as modern medical science on the subjects of Oncology and epigenetics.
- This was purely a literary study wherein the explored literature was analysed and interpreted.

Concept of *Dinacharya* in *Ayurveda*:

A daily ritual of self-care is called *Dinacharya*. *Ayurveda* emphasizes on the systematic daily regimen for a healthy life. Today's modern life style can be modified by making some simple interventions described in *Dinacharya*. Individual is advised to do exercise regularly, bathing, to dress up properly, use of precious stones and metals in the form of jewellery, use of shoes and umbrella while doing outdoor work.[10] Finally, indulgence in occupation for livelihood with moral and ethics also has a psychological bearing on one's health. These regimens seem to be petty but they play an important role in maintenance of physical as well as mental health.[11]

Time management is the only effort required to inculcate this health schedule in daily life. The daily regimen mentioned in *Ayurveda* texts has been briefly stated following [12,13,14,15]-

- *Brahama-muhurat-jagrana* waking up just before sun-rise
- *Vega-nissaran* - eliminate the natural urges in morning
- *Mukha-netra-prakshalana*,
- *Gandoosh & kawala*
- Cleansing procedures like washing hands and (washing of face and eyes), tooth brushing using pungent, bitter and astringent twigs, mouth wash & use of *Snighdha-dravya* and *Tambula* as mouth freshener
- *Anjana* application of collyrium
- *Nasya* Application of nasal drops with *Anu-taila*
- *Dhumpana* inhalation of medicated smoke etc.

Concept of Ritucharya in Ayurveda:

Ritucharya is the dietary and behavioural regimen for the maintenance of health in different ritu (seasons) of the year. Various disease conditions are a result of negligence in adoption of seasonal regimen. A year is divided into two Ayana (periods) - *Uttarayana* and *Dakshinayana*, depending on the direction of movement of sun. Each Ayana is further divided into three ritu. Thus, a year has six ritus (seasons) namely, *Shishira* (winter), *Vasanta* (spring) and *Grishma* (summer) of *Uttarayana* and *Varsha* (monsoon), *Sharad* (autumn) and *Hemanta* (late autumn) of *Dakshinayana*. [16] In *Uttarayana*, sun and wind are powerful and cause a debilitating effect on environment and living beings on the earth. [17] On the other hand, strength of a person enhances gradually in the *Dakshinayana*. Seasonal regimen mentioned in the Ayurvedic classical texts help in maintaining a good health.

Sadvritta (Ethical regimen):

Ancient scholars have mentioned the various principles of code of conduct known as *Sadvritta* which helps in maintain a healthy body and a peaceful mind. [18] The path of ethical, social, mental, moral and physical conduct induces a positive influence on the mind and body. It helps to lead a healthy and fulfilling life. [19] It helps in enhancing the *Satvik-guna* of mind. The following code of conduct of *Sadvritta* should be followed- [20]

- Speak the truth and use pleasant words in conversation
- Do not lose self-control. Have a respectable and protective attitude towards elders, forefathers, teachers, women, children and colleagues.
- Abstain from telling lies, anger, extreme grief, jealousy and greed
- Avoid company of people with evil thoughts.
- Avoid indulgence in *Himsa* (any activity which harm others), *Asteya* (stealing habits), *Anyathakma* (unlawful sexual activity), *Vyapada* (intention of harming), *Viparyaya* (finding fault with scriptures, elders, etc.)

Thus, the person who behaves as per the principles of *Sadvritta* becomes more divine and lives a good quality of life.

Preventive aspect of cancer: Modern view:

The WHO reported 12.7 million new cancer cases reported in the year 2008 and forecasted 21.4 million new cases by 2030, with nearly two thirds of all cancer incidences reported from low and middle-income countries. In upper middle-income and high-income countries, prostate and breast cancers are the most frequently diagnosed in males and females respectively, while lung and colorectal cancers are the second most common cancer respectively. Lung cancer is the most common cause in both sexes. In low-income countries, the lung and breast cancers remain the most commonly diagnosed cancer. Insufficient physical activities, unhealthy eating habits and stress has also been associated with this life-threatening disorder. [21] Researchers have found that there is a direct association among higher levels of alcohol consumption and increasing risk of few cancers, liver diseases and cardiovascular diseases. Major cancers can be prevented by improved balanced diet, proper physical activities and healthy practices. [22]

Impact of parental personal seasonal regimen in prevalence of cancer:

A healthy and well-nourished mother gives birth to a healthy offspring. Mother health status directly affects child health. *Acharya Kashyapa* has said that mother should not use any medication in first four month of pregnancy as it can adversely affect the growing foetus. According to modern science also use of any drug during time of organogenesis can result in congenital anomalies. A diseased mother or any exposure to teratogen results in diseased offspring like use of antiepileptic drugs at the time of pregnancy will results in IUGR baby with microcephaly. Mother age is also an important factor for healthy progeny. Risk of genetic disorders like Down syndrome is more in late pregnancies (generally >35 yrs of Age). [23] So, conception in appropriate age can reduce chances of occurrence of many genetic disorders.

By following proper *Masa-Anumasika Paricharya*, mother delivers a healthy baby with no or minimal complication. Proper *Masa-Anumasika Paricharya* should be followed by pregnant women and she should not indulge in contraindicated dietetics and conduct. Pathological reactions on the foetus due to neglect of antenatal care can result in Monstrosities, deformities, congenital diseases, atrophy or hypertrophy of foetus and death of foetus. Complicated or prolonged

labour results in birth asphyxia and its complication like neurological damage. Mother desires should be fulfilled during pregnancy i.e. *Duihradyavastha*. If mother desires not fulfilled during this period, it can adversely affect the offspring. It can result in limb deformity, eye deformity and dumbness in child. [24]

Parents should made child to follow proper *Dincharya* and *Ritucharya*. Improper lifestyle can lead in many complications like late night studies can cause vitiation of *Vata Dosha* and result in conditions like constipation, abdominal pain, headache etc. Excessive calorie intake, sedentary lifestyle, excess television viewing and playing computer games are major contributor for lifestyle disorders like childhood obesity, computer vision syndrome etc. Elimination of all these factors can prevent many diseases like cancer, obesity, heart disease etc. [25]

DISCUSSION:

In *Ayurveda*, diseases occurring due to lifestyle can be included under *Prajnaparadha* (intellectual blemish) or *Asatmya-indriyarthasamyoga* (unhealthy sensory perception); which result disharmony in the body either as increase or decrease of *Dosha*. The unhealthy lifestyle leads to *Angimandhya* (diminished digestive fire), *Rasa-vaigunya* (vitiation of rasa dhatu), *Amasanchaya* (accumulation of toxins), and further the *Srotorodha* (obstruction of channels); depending on that the pathology will be manifested.

The environment had a changed a lot. Those who are having enough *Bala* (strength) and *Vyadhi-kshamatwa* (immunity) only can survive today. The preventive measures for diseases occurring to vitiation of *Dosha* mentioned in *Ayurveda* must be implemented wisely and effectively. The implementation plan must be started in the genetic level itself to get a healthy progeny. It is seen that most of the lifestyle diseases are running familial. If the parents are diabetic, children are prone to it. So, as a precaution *Ayurveda* instructs that the marriage should happen between *Asanchari-roga-kula* (non-disease running family) as well as a planned pregnancy by undergoing *Garbhadhana-poorva-shodhana* (bio-purification before conceiving a child) and practicing the *Garbhini-paricharya* (pregnancy regimen).

Science of *Ayurveda* offers various non-pharmacological approach including *Dinacharya* (daily regime), *Ritucharya* (seasonal regime), *Rasayana* (rejuvenation therapy), *Sadvritta* (ideal routine) for maintenance of health and well-being. It provides appropriate solution to the problem arising out of faulty lifestyle. Proper dietary management is another important pillar in prevention of lifestyle diseases. Diet (*ahaar*) is one of the three pillars (*Traya-upastambha*) which supports the life.

CONCLUSION:

From the above discussion, it can be concluded that following a healthy regimen is one of the keys for good health. The personal way of living can always be managed despite a hectic routine to lead a healthy life. The seasonal variations affect the body directly and following the guiding principles specified for different seasons help in developing better immunity. These factors can go a long way in preventing lifestyle disorders. Apart from conventional drug approach, non-pharmacological aspects of prevention of disease should also be advised to a patient. However, patient compliance is a concern for success of this approach. This thematic review can lead a way for research studies in future.

Lifestyle disorders constitute not only a major threat to the health of the people but also a major challenge for overall development of the nation. It is increasingly affecting the younger population at their active productive life. Thereby, it is not only increasing the number of productive life years lost, but also creating a big financial burden due to prolong health care cost. The current life style disorders can be tackled by practicing a healthy regimen. The principles of *Ayurveda* and Yoga can be popularized among the common people where every individual can be the care taker of his own health.

Modern medicine recently invented that understanding the genetic makeup of an individual is the key towards personalized therapy, which the *Ayurveda* system of medicine practices from time eternal as the *Prakriti* based treatment. Lifestyle correction in accordance with one's *Prakriti* is the simplest and best way for health promotion, disease prevention and management of chronic diseases. It should be possible to combine the strength of *Ayurveda* with the advanced technologies of other allied science to provide quality traditional health care.

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