



Review Article

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A REVIEW ON SWARNAPRASHAN: A UNIQUE TRADITIONAL WAY OF IMMUNIZATION IS THE NEED OF THE HOUR

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ABSTRACT

In the present era where we are facing a new threat every day in the form of fresh emerging diseases, contaminated food and adverse environmental conditions etc, our children are suffering more in such unfavorable conditions. Because of their less developed immune system, they are more vulnerable to vicious cycles of disease and infections. Immunization in modern practice confers only disease specific immunity and has several adverse effects. To improve bala (immunity and strength), medha (intelligence), agni (digestion), ayu (life span) and to prevent child from various diseases and disorders, Acharya Kashyapa has mentioned important role of swarnaprashan. It is a lehan karm which is a unique traditional method of immunization. In this pure gold is given to the child orally along with honey, ghrit (ghee) and other herbs. It helps in boosting up the intellectual power, physical strength and produces generalized immunity in the body without causing any adverse effect. It is the need of the hour to conduct more and more researches on alternatives as swarnaprashana and main stream them. As they will not only help in creating a strong and healthy generation in future but will also serve as an important contribution of Ayurveda to the world.

Keywords: Swarnaprashan, Swarna bhasma, Gold, Immunomodulation.

INTRODUCTION

In the race of modernization, we have disturbed the nature and our lifestyles to such an extent that we are facing a new threat every day in the form of emerging deadly diseases, epidemics, contaminated food and adverse environmental conditions etc. Our children are suffering more in such detrimental conditions. Because of their immature immune system, they are more vulnerable to vicious cycles of disease and infections. Recurrent respiratory infections, diarrhea etc. are the most common causes of illness in immune compromised children. Also, Immunization in modern practice confer only disease specific immunity and has several adverse effects like injection site reactions, fever, drowsiness, vomiting, tiredness etc.

So as per the need of present time if we find out something promising from the treasures of traditional system of medicine, which could enhance immunity in children without causing any kind of serious adverse effects, it would be a fortunate thing in the field of preventive pediatrics. Swarnaprashan in this context can serve the purpose.

Swarnaprashan as mentioned by acharya Kashyapa is a lehan karma (giving something to lick), which is a unique traditional method of immunization, that helps in improving the bala (immunity and strength) of child, medha (intelligence), agni (digestion), ayu (life span) and helps in preventing child from various disorders. Swarnaprashan can be given to all healthy children. Benefits of Swarnaprashan has been described according to the duration of administration of swarnaprashan. On administering swarnaprashan for one-month child become tremendously intelligent and stays free from diseases and by giving swarna for 6 months child become shrutadhara i.e he can retain anything he listens¹

The present article is a brief review of literature and classical references of swarnaprashan, therapeutic properties and relevance of swarnaprashan. Pubmed, medline database have been used for the search of relevant literature and research paper.

LITERATURE REVIEW

Acharya Kashyapa has coined the term Swarnaprashan. The term Swarnaprashana means administration of gold alone or along with other herbs in a Leha or Prasha form. Acharya Kashyap has described Swarnaprashan in the context of Lehana.

Lehana literally means giving something to lick. According to acharya kashyap healthy or diseased state of a child depends on lehana.² Lehana has been indicated for those children who are healthy but have compromised breastfeeding and are having minor functional problems of metabolism.

Acharya Kashyap has explained that, the babies born to the Dushprajata mothers should be administered with Lehana. Dushprajata means a woman who had history of difficult labor. All abnormal conditions in obstetrics case like prolonged labor, delivered prematurely or post term, abnormal presentation and associated complications like preeclampsia etc. Other indications of lehan karma are alpakhshira, ashira Janani, and dusta Kshira Janani. Akshira janani can be correlated to those mothers who had complete failure of lactation or are unable to breast feed their babies. Lehana is also indicated in a child who stays unsatisfied after breast feed or constantly cry even after getting proper breastfeed or the child of a seriously ill mother. Child with dominating vata and pitta dosh but diminished kapha dosh, who cannot sleep at night, eats too much, have deepagni (good digestion and metabolism), passes less feces and urine or doesn't pass stool for 3 days or a child who is not diseased but still is weak or not gaining weight are considered suitable for lehan karma.³

Lehan karma is contraindicated in certain conditions like poor digestion, excessive sleepiness, increased frequency of stool and urine, indigestion, underweight, child born to a mother who takes complete diet, fever, jaundice, edema, anemia, cardiac anomalies, cough, dyspnea, anorectal disease, GIT disorders, constipation, skin diseases, vomiting, anorexia etc⁴.

Swarnaprashana as a leha can be administered to all the healthy children to improve their growth and development, immunity and digestion.

The procedure of Swarnaprashan is described in Kashyap samhita as-

“Keeping the face towards east, swarna (gold) should be rubbed on washed stone with little quantity of water. It should be then churned with honey and ghrita and given to a child for licking (lehana). Swarna increases intellect, digestive and metabolic power, strength, gives long life, is auspicious, virtuous, aphrodisiac, increases complexion and eliminates evil effect of grahas”¹

Acharya Sushrut and Vagbhata have prescribed swarna along with various drugs to the new born soon after the birth. This ritual of giving swarna along with madhu ghrit and other herbs to the new born baby soon after the birth is called jaatkarma sanskar. According to Acharya Sushrut on the first day of life honey and ghrita mixed with small quantity of ananta powder (gold) should be given to the baby three times a day. On second and third day lakshmana siddha ghrit (ghrita medicated with lakshmana) should be given and on the fourth day honey and ghrita should be given twice. Amount of honey and ghrita should be svapanitalsamita i.e. the amount which fills the palm of baby.⁵ The reason behind such recommendation is that there is inadequate secretion of breast milk for the first few days after delivery so to fulfill the nutritional requirement of baby such practices were considered essential.

Acharya Sushruta has also mentioned different lehan yoga for different age groups (ksheerad, ksheerannad, annad). Also, he has mentioned different combination of herbs and gold to improve growth and development, intelligence and immunity in child.

Acharya Sushruta - has described four preparations containing gold which provides general immunity, promote growth & development & enhance the intelligence. These are: Swarna bhasma with kushtha (*Saussurea lappa*), vacha (*Acorus calamus*), madhu (honey) & ghrita; Swarna bhasma with paste of brahmi (*Bacopa monnieri*), sankhpuspi (*Convolvulus pluricaulis*), with honey & ghrita; Swarna bhasma, arpushpi, vacha, honey & ghrita, Swarna bhasma, kaidarya, shweta durva (*Cynodon dactylon*), ghrita.⁶

THERAPEUTIC EVALUATION OF IMPORTANT INGREDIENTS OF SWARNAPRASHANA

Swarnaprashana as mentioned in Kashyap samhita has swarna, madhu (honey) and ghrit (ghee) as important ingredient.¹ All these have a significant role in enhancing immunity. Various researches have been done to prove the efficacy of swarna bhasma and swarnaprashana in strengthening immunity and promoting growth in children.

Swarna bhasma

Gold is a transition metal and group 11 element of periodic table. It is the least reactive chemical element known after noble gases.

So swarna bhasmikaran is done to make it little reactive so that it can show its pharmacological properties

Bhasmikaran (incineration) of Swarna is an ancient concept of reducing the size of particle of gold. Researches on bhasma has proved that bhasma are biologically produced nanoparticles. It was revealed in atomic absorption spectroscopy that Swarna Bhasma contains about 92 % of gold. Absence of mercury demonstrated in Cold vapor method of atomic absorption spectroscopy is considered as a marker for proper incineration. Through the infrared spectrum of Swarna Bhasma no organic compounds were seen. Same study showed that Swarna Bhasma principally constitute of globular gold particle of size 56-57 nm.⁷

Swarna bhasma has following therapeutic properties:

Immunomodulatory activity

In an experimental study to evaluate the efficacy of Swarna Bhasma on non-specific immunity, male mice were given Swarna Bhasma orally in incremental dose for 10 days. It was found that, Swarna Bhasma significantly ($p < 0.001$) increased peritoneal macrophages count and stimulated phagocytic index of macrophages.⁸

Free radical scavenging activity

In an experimental study on chronic Swarna Bhasma treated animals, it was found that there was significant increase in superoxide dismutase and catalase activity in those animals, as these two enzymes lessen the free radical concentration in body. Antioxidant or curative effects of Swarna Bhasma has also been reported against global and focal models of stroke.⁹

Analgesic activity

In an experimental study four types of stimuli (chemical, electrical, thermal and mechanical) were used to investigate analgesic effects of swarna in rats and mice. It was observed that, administering Swarna Bhasma orally at a dose of 25-50 mg/kg, showed analgesic activity against acetic acid induced writhing (chemical stimuli), electrical stimulation by Pododolorimeter, Thermal stimuli by using eddy's hot plate and algesimeter and mechanical stimuli.¹⁰

Anti-stress effect of swarna

In a research to investigate therapeutic potential of swarna bhasma in restrain induced stress at different time points of 01 hour, 02 hours and 04 hours using experimental rat model. Prior to restrain stress Rats were pretreated with Swarna Bhasma in a dose of 25 mg/kg orally for 10 days. Levels of Brain catecholamine, serotonin and plasma corticosterone were determined following 01, 02 and 04 hours restraint stress by using HPLC and luminescence spectrophotometry. It was found that there was significant restoration of altered levels of brain catecholamines (norepinephrine, epinephrine and dopamine), 5 HT and plasma corticosterone to near normal levels in restrain stress induced rats.¹¹

Toxicological studies

In an experimental study on swarna bhasma, it was found that the acute oral administration of Swarna Bhasma showed no mortality in mice (up to 1 ml/20 g body weight of Swarna Bhasma suspension containing 01 mg of drug). Also, no toxicity was seen on chronic administration of Swarna Bhasma, as judged by

SGOT, SGPT, serum creatinine and serum urea level and histological studies.¹²

Madhu (honey)

Honey is carbohydrate rich syrup prepared by honey bees from the nectar and pollen grains of different plants. Fructose and Glucose are the major components of honey, but large number of other chemical compounds are present in small quantities. The precise composition of honey varies according to the plant source, season and production method. According to Acharya Charak honey is best potentiating agent because of its derivation from various agents. Honey proves to be curative in various disease in conjunction with many other drugs and medicinal remedies as it partakes the properties of drugs or substances with which it is so used (Yoga-Vahika). Hence it is an excellent synergist.¹³

According to various research works honey possesses following therapeutic properties.

Anti-microbial properties

Hydrogen peroxide in honey is the major contributor to its anti-microbial activity. Different concentrations of hydrogen peroxide in different honeys result in their varying antimicrobial effects.¹⁴

Antioxidant property

In an experimental study on obstructive jaundice, Kilicoglu et al (2008) examined the effects of honey on oxidative stress and apoptosis. It was found that honey diminished the negative effects of bile duct ligation on the hepatic ultrastructure. This effect is due to anti-oxidant and anti-inflammatory activities of honey.¹⁵

Anti-inflammatory action

In a recent study, it was found that honey shows anti-inflammatory effect by reducing the activities of cyclooxygenase-1 and cyclooxygenase-2.¹⁶

Anti-diarrheal activity

In a clinical study to evaluate the influence of honey on the duration of diarrhea, it was found that honey shortens the duration of bacterial diarrhea. Also, it doesn't prolong the duration of nonbacterial diarrhea. It was concluded that honey can be safely used as substitute of glucose in oral rehydration solution provided it contains electrolytes in recommended amounts.¹⁷

Toxicity /Adverse effects of honey

Honey is quite free of any toxic or adverse effects. On Topical application honey may cause transient stinging sensation. Otherwise it is described in different forms as soothing, pain relieving, non-irritating and a painless dressing change. Honey rarely cause allergy but there could be an allergic reaction to either bee proteins or pollen present in honey. Dehydration of tissues may be caused by excessive application of honey, which can be restored by saline packs. When applied to large open wound in diabetics there is theoretical risk of rise in blood glucose levels. Risk of wound botulism from spores of Clostridia (which is sometimes found in honey) can be minimized by gamma irradiation. Gamma irradiation kills clostridial spores without causing any harm to antibacterial activity of honey.^{18,19}

Ghrit (ghee)

Ghrita (ghee) is a class of clarified butter originated from the Indian Subcontinent and is commonly used in South Asian and Middle East countries. It is the important constituent of Indian cuisine from centuries.

In Ayurveda ghrita comes under maha sneha which includes ghrita (ghee), taila (oil), vasa (fat) and majja (marrow).²⁰ Among these, ghrita is considered superior. Ghrita by its unctuous property subdues vata, by its cooling property it subdues pitta, inspite of being possessed of qualities similar to those of kapha, subdues it when prepared with proper drugs. There is no other unctuous article which imbibes the quality of drugs to the extent that ghee does. Hence ghee is regarded as the best of all unctuous articles.²¹

DISCUSSION

Swarna is used in the form of bhasma in swarnaprashan. Nano sized particles of bhasma are easily absorbed and assimilated in the body. Besides having many medicinal benefits, Honey, which is the collection of pollen grains acts as allergen. Mixture of ghrit and honey in equal proportion is considered as poison. When this combination is given in smaller amount for longer duration, it helps in triggering immune response in the body. Honey being yogvahi, along with ghrit, which can imbibe the quality of drugs mixed with it, enhances the therapeutic properties of gold like immunomodulatory action, anti-oxidative & anti stress activity etc. Swarnaprashan is safe for the children as no toxicity of this combination has been reported so far. Acharya Kashyap has indicated lehan for the babies who are deprived of breast milk. Human milk has potent antioxidative properties. Babies who are not being breastfed are prone to free radical induced damage. Swarna Bhasma has been found to possess anti-oxidative properties and its administration can reduce free radical induced damage in neonates who are not being breastfed.²² According to a multicentric public health initiative and clinical study pilot that has been conducted in Karnataka, 3,48,177 children aged between 0-16 years were given Swarnamrita Prashan once in a month on Pushya nakshatra day at 16 centres and to 30 children on daily basis for a month. It was found that in both the studies children had fewer occurrences of infections and better general health.²³ No incidences of toxicity have been reported regarding swarnaprashan till date.

CONCLUSION

Swarnaprashan is safe and easy to administer. Looking into the benefits it confers, this unique traditional way of immunization should not be overlooked. Further researches and clinical trials are required to be conducted to establish its efficacy and safety and mainstream this distinctive method of immunization.

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