



Review on suvarnaprashana therapy; Concepts, practice and future prospects

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Abstract

Child health is the key to healthy youth and adulthood. Child mortality of a nation signifies level of its healthcare standards. Several diseases of adulthood bear their roots to childhood. It is thus important to improve health status of children and prevent diseases to facilitate their growth into healthy adults. Swarnaprashan is an age-old time-tested mode of disease prevention in Ayurveda using oral intake of gold. It dates back to 1000 B.C. and is still practiced in several parts of India. This article reviewed the classical knowledge on the subject, analysed it in light of contemporary science and research, presented its picture of current scenario and future prospects. It is found that swarnaprashan not only prevents several diseases but also helps brain development. It is thus recommended that this art of medicine deserves to be widely publicized and included in national health programs extending its benefits to large masses.

Keywords: swarnaprashan, scientific basis of swarnaprashan, lehan, swarna bhasma, child health through ayurveda

Introduction

Swarna

Swarna or gold is described in texts of ayurveda under subcategory of 'loha varga', namely 'shad dhatu' (six useful metals), 'saar loha', 'shudhha loha' (pure metals),^[8, 9, 10] Metals are used after shodhan (purification) and maran (incineration/technique of making fine powder). Bhasma (fine powder) gets assimilated in body tissues, their proper use treats severe diseases, makes the body stronger and delays old age^[11]. Swarna is considered virya (essence) of agni (fire)^[12]. It is related to planet guru (jupiter)^[13] and has peet varna (yellow colour)^[14] It burns with a yellow flame and suffers no loss in weight in flame^[15, 16]. Swarna is used in rajayakshma (~tuberculosis), is rasayana (~tonic, immunobooster), hridya (~cardiotonic) and mastishka poshaka (nervine tonic)^[17]

Swarnaprashan

Swarnaprashan or internal administration of gold is a popular practice in India for enhancing immunity and intellectual development. In this sanskara, swarna bhasma is administered to baby mixed with honey and ghrita with or without herbs. There are three main references found in ayurvedic classics. These are as follows: 1. Acharya Sushruta has opined about administration of following drug combinations: 1. Swarna churna (gold bhasma), kustha (Saussuria lappa), honey, ghee, vacha (Acorus calamus) or 2. Matsyaksha, sankhpushpi (Convolvulus pluricaulis), honey, ghee and gold or 3. Arkapushpi (Hibiscus hirtus), honey, ghee, gold, vacha (Acorus calamus) or 4. Gold, kaidarya, shwetadoorva (Cynodon dactylon), ghee^[24]. "Swarna Bindu" it is one of the methods of Suvarna prashana explained in Ayurveda as unique method of boosting immunity and intellect of children. In kashyapa Samhita, it is intended to boost memory, intelligence and immunity in infants. It is described under Jatakarma Samskara (neonatal care). One of the 16 essential Samskara described in Ayurveda. Swarna Prashana fulfilling the first motive of Ayurveda, i.e. preventive measures (swasthasya swasthya Rakshana).

Our body tendency to check the micro-organisms who spread the disease and deactivate or lowering down its intensity, this is known as Vyadhikshamtva (immunity). Prevention of disease by boosting the immunity has always been the most important point of discussion in medical field and now-a-days Swarna prashana works as oral immunity enhancer (oral vaccine).

It is a unique method of immunization which is practiced from ancient time, valued as child health nation. Many studies available to understand the mechanism of its ancient texts^[12, 13, 14] Administration of colloidal gold using fine particles of metallic gold or suvarna bhasma has been advised in ayurveda in infants and children in various forms. Suvarnaprashana described in Kashyapa Samhita is intended to boost memory, intelligence and immunity in infants. It is one of the oldest applications of gold nano medicine. Suvarnaprashana therapy is becoming widely popular and being administered on the pushya nakshatra of every month at ayurveda centers across India. Clinical and pharmacological studies show immunomodulatory, nootropic as well as therapeutic effects of suvarnaprashana therapy^[21, 22, 23].

Concepts of Suvarna Prashana

Ayurvedic texts have copious references describing the use of gold metallic powder (probably fine gold dust) or suvarnabhasma in various rejuvenate therapies. Gold in the form of fine gold dust, red colloidal solution, Swarna Patra, Swarna Bhasma, Swarna Parpati, Kharaliya (trituated) formulations and sindoorkalpa, often combined with ghee, honey, Madhya and Rasayana herbs were popularly used in the Ayurveda therapies. Despite their efficacy, these age-old therapies were discouraged, side-lined and almost forgotten during the colonial era and even after freedom. The use of bhasma form Gold, Silver etc. metals and most herbomineral formulations of ayurveda suffered a huge blow when some studies tainted Ayurvedic herb-mineral formulations as toxic and contaminated with lead, mercury, arsenic and other toxic compounds [16, 17]. The impact of these studies was such that herb-mineral Ayurvedic formulations have been almost completely banned in most Western countries. What is more alarming is that the word, "heavy metals" is becoming synonymous with most indigenously procured and manufactured Ayurvedic medicines. However, despite of these set-backs, after a long lull, Ayurvedic bhasms and other herbo-mineral formulations are receiving a renewed focus? They are reemerging as some of the most effective drugs due to renewed drug discovery strategies [13]. Kashyapa Samhita written by Vriddha Jeevaka, one of the oldest textbooks of Kaumarbhritya (one of the eight branches of Ayurvedic dealing with mother and child health care), gives the first reference about giving Suvarnaprashana as a therapy for infants. This has been advised in infants and children from birth till 1 year of age. There is misconception among the common man that, Suvarnaprashan is vaccination method in Ayurveda, because majority of the physicians administer it monthly once on the day of Pushya Nakshatra. But it is incorrect; Suvarnaprashan is a Rasayana Chikista, should be administered continuously to get the optimum therapeutic effects for the physical, mental, intellectual and spiritual well-being of the children. [11, 12, 13].

Drug Support Physical Health, Intellect, Strength and Intelligence.

Acharya Kashyap describes method of swarnaprashan or gold licking as baby's face is kept towards east, gold should be rubbed on a washed stone with a little quantity of water then churned with honey and ghrita, and given to child for licking. This Swarnaprashan increases intellect, digestive and metabolic power, strength, gives long life, is auspicious, virtuous, and aphrodisiac, increases complexion and eliminates the evils of grahas (serious infective illnesses of children). By intake of gold for one month the child becomes extremely intelligent and is not attacked by the diseases, and by using for six months, is able to retain what so ever he hears. Acharya Vagbhatta also describes drug combination comprising of gold as one of the contents as follows:

1. Hema (gold), sweta vacha (*Acorus calamus*), kushta (*Saussuria lappa*).
2. Arkapushpi, Kanchan (gold)
3. Hema (gold), matryoshka, Sankha
4. Kaidarya, kanaka (gold), vacha.

These four groups of drugs when consumed mixed with honey and ghee, for a period of one year bestow good body growth, intelligence, strength, tones skin, tones skin colour and beneficial as a whole [2, 3, 4].

Prospects of Suvaranaprashan

There is need of standardizing the preparation, dose, duration and method of administration of Suvaranaprashan with the potential role of Suvaranaprashan in boosting nonspecific immunity and overall growth and development; initiative need to be taken to promote and incorporate Suvaranaprashan as a Public Health Initiative by Central Government. The dept. of AYUSH should include Suvaranaprashan under mother and child health care scheme. Before doing this, the dept. Of AYUSH should frame guideline for preparation, distribution, marketing and practice of Suvaranaprashan [4, 5]. The scope of Suvaranaprashan needs to be evaluated in Geriatric medicine as a preventive and palliative therapy for degenerative neurological disorders like Alz, dementia etc. Given the role of gold in glycaemic control, Suvaranaprashan needs to be evaluated as therapy for juvenile (Type -1) diabetes and early onset Type-2 diabetes [5, 6]. It is unique and one of the best examples of nanomedicine applied for preventive health care in Ayurveda. The efficacy and safety of Suvaranaprashan therapy entirely depends upon the quality of Suvarna bhasma, ghee and honey. Hence standardized suvarna bhasma along with superior quality herbs, ghee and honey should be used [8, 9].

Preparation of Suvarna Bindu (Gold Drops)

Traditionally Shuddha Suvarna has been advised to be rubbed on rubbing stone with water and then emulsified with madhu and ghrita to achieve a fine colloidal suspension. We now use Suvarna bhasma along with equal proportion of ghrita and madhu. Madhu and Ghrita in equal proportion have been considered as a Viruddha Samyoga (unwholesome combination). However, it is a popular belief that giving allow dose of this otherwise toxic combination is believed to trigger immune response which help to strengthen a child's immunity for toxic and allergen. Ghrita fortified with Madhya and Ramayana herbs like Brahmi (*Bacopa monnieri*), Mandookaparni (*Centella asiatica*), Yashtimadhu (*Glycyrrhiza glabra*), Shankhpushpi (*Convolvulus pluricaulis*), Vacha (*Acorus calamus*) and Guduchi (*Tinospora cordifolia*) are commonly used in suvarna bindu preparation by clinicians expecting enhanced Immunomodulatory and nootropic effect of Suvaranaprashan in children. Following are some of widely used ratios for for the preparation of suvarna bindu large Batch: 2.4 gm of Suvarna bhasma is added to 250 ml of honey and 250 ml of processed ghee [12, 13, 18].

Individual Dose

100 mg suvarna bhasmais added to 6 ml of processed ghee and 6 ml of honey is kept separately. Honey is mixed with ghee just before administration. Although large batches are convenient for commercial use. Suvarna bhasma may settle down in ghee after some time, thus reducing the concentration of Suvarna bhasma per dose. Hence, preparing Suvarna bindu in smaller batches is desirable [19, 20].

Duration of Suvaranaprashan Therapy

Suvaranaprashan can be given from birth to sixteen years, keeping in mind the rapid growth and development during this phase of life. Some practitioner advises it only up to 12-14 years. Clinically, a minimum therapy of 6 months, 1 year to two year is recommended in order to get considerable results. Experienced Vaidya says that, administration of Suvaranaprashan just on the day of Pushya Nakshatra (once in a month) does not provide significant health benefits. The best method is to give the low dose of Suvaranaprashan (Suvarna Bhasma less than 0.2 mg per dose) for a period of 3 months. If this method is not possible, then Suvaranaprashan can be given for 10- 12 days per month. Such 6-12 cycle should be repeated to get optimum health benefits [5, 7, 8].

Dose of Suvaranaprashan

Kashyapa has mentioned about dose of drug in children. Dose in first month of baby is equal to a vidanga phal (fruit of *Embelia ribes*) which is then increased monthly. Suvaranaprashan is done mainly on pushya nakshatra (an auspicious date) [5, 8, 9].

Relevance of Suvaranaprashan and Pharmacological Effect of Swarna Bhasma

1. Swarnaprashan uses Swarna churna Or Bhasma. It is prepared by maran or incineration. This results in decrease in particle size up to 56 nanometre and converts the inert metal into ionic form. This results in better absorption and assimilation and enables the pharmacological properties of gold.
2. Honey contains pollens which act as mild allergen. This stimulate the active immunity of baby which protect it against allergic illnesses which is common in this age group. It also serves as anuran (vehicle or medium for absorption of drugs).
3. Administration of honey and ghee mixed in equal quantity is considered visha (toxic) in Ayurveda. Here, it is given in small quantity which is not enough to show any toxigenic effect but helps develops resistance to toxin by stimulating immunity.
4. Gold particle uptake occur in small intestine by persorption through single degrading Enterocyte in the process of being extruded from a villus. Swarna Bhasma principally constitute globular gold particle of 56-57 nm and thus it is possible that these particles would reach the target site of action through blood after gastrointestinal uptake.
5. Administration of Swarna Bhasma showed no toxicity as judged by SGOT, SGPT, serum, creatinine and serum urea level and Histological studies.
6. Gold ash is found to be effective in motor neuron disease in small dose. Acharya Kashyap has indicated lehan for disparate or those born by difficult labour as these babies have a higher incidence of birth asphyxia and neuromotor sequel.
7. Gold Bhasma is also found to have analgesic band antistress activity restoring stress induced elevation in level of Norepinephrine, dopamine, 5HT, and cortisone to normal level.
8. A study conducted showed that the formulation Swarnaprashana has nootropic action and anti-Acetylcholinesterase activity. Hence, it can be employed in enhancing the memory of child and for the treatment and management of Alzheimer's disease [12, 13, 14].

Conclusion

In today's digital World, it is challenging question to every parent to maintain physical, mental, social and spiritual health of children without any side effects. It is also the problem of every nation as "children are the future of any nation". Swarna Prashana helps little but to solve this problem. It helps to grow the child with best immunity and intellectual performance. This concept of Suvaranaprashan describe by Acharyas in Ayurvedic text needs experimental studies at clinical level. Theory of vaccination resembles to the concept of Vyashikshamtva. Vaccination enhances humoral immunity and from above description of benefits of Suvaranaprashan. It also does that. It is an approach towards positive health care programme for children by increasing the Vyashikshamtva (Immunomodulation) where Acharya described about Vyashikshamtva is "The individual's resistance to disease which includes both the capacity a attention of the unmanifested one. It is an ancient immunization technique with no adverse effects I and provide a better life with fulfilling WHO'S definition of Health "(i. e. Physical, mental, social and spiritual wellbeing). So, Swarnaprashana Sanskara worldwide accepted as immunisation programme for healthy World. After all, it makes a child healthier than most other children.

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