Role of SwarnaPrashan to Boost Immunity in Children

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ABSTRACT
Swarna Prashan Sanskar mentioned under shodash sanskar is an ancient ritual. SwarnaPrashana means to administer Swarna (gold) in liquid form along with honey, ghee and some herbal medicines. It improves the intellectual power and enhances the non-specific immunity of the body. Materials and Methods-Many databases including research articles from Pub med, J-AIM, research gate, ayurvedic text books were considered with the key words like ‘Swarna Prashan Sanskar’, ‘Sanskar’, ‘Immunity’, ‘Immunization’. Results-In Swarna Prashan we use Swarna bhasma which is in form of nano particle which is easily absorb by small intestine and would reach the target site of action through blood. Several studies show Swarna bhasma showed no toxicity as judged by SGOT, SGPT, Serum creatinine and Serum urea level and histological studies. Gold ash is also effective in motor neuron disease in small doses. Gold is a good immunostimulant and also stimulate phagocytic index of macrophages. Swarna bhasma also prevents free radical injury to tissues and have nootropic, antiacetylcholinesterase, analgesic and antistress activity. Honey has an inhibitory effect to many bacteria and also develops resistance against allergens remaining unaffected by them. Ghee has Omega 6 and Omega 3 fatty acid that is good for neurological and brain development. Conclusion- According to Ayurvedic literature it would possess properties like madhura, rejuvenate, immunity booster, improves complexion and growth of the body, accelerate growth of the brain and improves memory, also increase digestion power of the body.

KEYWORDS
Swarna, Prashan, Immunity
INTRODUCTION

_Sanskar_ are performed for the physical, social, and religious development. The word _Sanskar_ is derived from root word ‘Kri’ with ‘Sam’ upsarga, which is being used for several meanings for example in sense of education, cultivation, a purificatory sacrament or ceremony to enhance the qualities. In _Ayurveda_, the word _sanskar_ is “Sanskarao hi Gunanantradhyanum” means incorporating the specific qualities (in various dravyas or medicines as rasa aushadhi)\(^1\).

In hindu dhrama granthas about 16-40 sanskar are described, but in practice 16 sanskars are performed\(^2\). _Jatakarma Sanskar_ is the first _sanskar_, which is described by Acharya Charaka. In _Jatakarma sanskar_ honey mixed with ghee should be licking to new born child\(^3\). Other Acharyas said that it can be mixed with _Swarna_ also& it boost the immunity of children many folds. From ancient time, _Swarna Prashan_ has been effectively done for boosting the immunity of neonate, which has been largely replaced by costly vaccines. Immunity means capacity of body to limit the spread of infection and decrease the intensity of disease. In ayurved immunity can be correlated with vyadhikshamtava.

Vaccines produce active acquired immunity means immunity to a particular diseases, whereas _SwarnaPrashan_ produces non-specific immunity means it activates non specific immune cell that respond to various antigen and protect the body from various diseases. It is a most challenging question for parents and to the government too, how to preserve and enhance the physical, mental health and immunity of children where they suffers from adverse effect of modern medicines, improper life style, excessive intake of junk foods and preservative foods, and exposure of electronic distraction. In Ayurveda _Swarna Prashana Sanskar_ is in practice for more than of 1000 years. It enhances the physical and mental health of children without any side effects. Now a days, swarna prashan sanskar is promoted by many ayurvedic practitioner and by the government of few states. In many places in India swarna prashan sanskar is termed as Swarna Amrita Prashana, Swarna Bindu Prashana\(^4\).

AIM

To study benefits of _Suvarna Prashana Sanskar_ in details.

MATERIALS & METHODS

Many databases including research articles, Pub med, J-AIM, Research Gate, , Ayurved
research data base (6th edition from 2001-2014 thesis included), ayurvedic, various modern text books and API were considered reviewed with the key words like Swarna Prashan Sanskar, Sanskar, intellectual performance, immunity, immunization.

**SWARNA PRASHAN IN AYURVED-**

Acharya Kashyapa described the *Swarna Prashana* vidhi in detail with its benefits. As per Aacharya Kashyap, In Swarna Prashan *Swarn* is rubbed on a washed stone with honey, ghee and water and then while keeping the baby's face towards East Swarn is given to child for licking. The benefits of this Sanskar is-

- सुवर्णप्राशनं होतमेधागिर्गिऱ्कर्डश्रीमं।
- आयुष्मं मंगलं पुष्यं कृष्णं वर्णं ग्रहापहम॥
- मासात परमेधावी व्याधिभिंर्न च दृष्टते।
- षड्भिंमार्श्शुतदाः सुवर्णप्राशनानंद्रवेत॥

(Medhaagnibalvardhanam) Medhaagnibalvardhanam means improvement in intelligence, digestive power, and strength of body, Ayushya means improvement in life span, Mangalya means auspicious, Punya means sacred, Vrishya means aphrodisiac, Grahapaham means relieves all bad effects of grahas. If SwarnaPrashan administer to child for one month, child becomes Parammedhavi means Genious and if administering for six months, child becomes Shruta Dhara means he can remember all things whatever he listen.  

2. Acharya Vagbhatt described gold licking is as follows:

Paste of aindri, brahmi, shankhpushpi and vacha ,one harenu in quantity, mixed with honey and ghee, sanctified by touching with tip of kusa grass with sacred hymns and held in a plate resembling in asvattha leaf, made of gold, should be given to the child to lick to promote intelligence, long life and strength.  

3. Four formulation of Swarna are described by Acharya Sushruta which enhances intellectual power and overall growth of baby. These are following combination of Swarna which are given below-

- Kustha, Vacha, Brahmi, honey and Ghrita
- paste of Bhrami and Sankhapushpi should
- Arkapushpa, Vacha with Ghrita and honey.
- Kaidarya and Shwet Durva with Ghrita.  

Dosage-The accurate dose of swarnaprashan is not described by any acharyas in literature, but by calculation of dose of swarna bhasm we can calculate overall dose of swarnaprashan. References from the various text which are listed –
• 1/4th–1/8th Ratti (15–30 mg) Swarna Bhasma
• 2 Gunja (250 mg)
• 1 Gunja (125 mg)/As per age
• 1 Harenu
• 1/32 Ratti (3.9 mg)
• 15.5–62.5 mg of Swarna Bhasma.

**Ayurvedic property of gold**- According to Ayurvedic literature it would possess the following properties –

**Rasa**- kashaya, Tikta, madhura, katu  
**Guna**- guru, snigdh, picchila  
**Veerya**- sheeta (cold)  
**Vipaka**- madhura (sweet)

**Property**- Swarna bhasma is sweet in taste, strengthen the body, beneficial for heart and good for eyes, it also improve intellectual power. due to it has the property to pacify all doshas it as a rasayan, and helpful in punsamvan sanskar, it remove all toxic substance from the body and good for skin. It is also helpful to cure many diseases as anemia, tuberculosis, diarrhea, colitis, heart disease, murcha etc.

**Pharmacodynamic property of gold**-  
In the traditional Indian ayurvedic medicine Swarna bhasma has been utilized for several clinical disorders, including bronchial asthma, rheumatoid arthritis, diabetes mellitus and nervous system diseases. Several studies on gold nanoparticles revealed that it conjugates with antigen to influence the activation of T cell. Gold nano particles act as drug carrier and an important demonstration of potential of multifunctional for drug delivery. Swarna bhasma should be generally administered orally mixed with honey, ghee or milk. Many pharmacoclinical studies shows that gold has antioxidant and restorative property. Gold nano particles also have adjuvant property. It act as an antigen carriers and activate phagocytic activity of macrophages and influenced the function of lymphocytes. Thus it is responsible for their immunomodulating effect. By conjugating with low and high molecular weight antigen, gold stimulates respiratory activity of cells of the reticuloendothelial and also show antistress activity. A pharmaco-clinical study done on rat at different point of time in restraint induced stress. Prior to this stress induction, rats were treated with swarna bhasm. The dose of swarna bhasm was 25 mg/kg orally for 10 days. HPLC technique was used to determine brain catecholamine, serotonin and plasma corticosterone levels. The level of brain catecholamines (norepinephrine, epinephrine and dopamine), 5 HT and plasma corticosterone was near to be normal.

**Toxicity Study done on gold**-
A toxicity study was done on mice with nanoparticle of 500nm for 15 days. Long term survival and without toxicity was found in histological specimen of mice tissue (lungs, kidney, liver and spleen)\(^{22}\).

**Pharmacodynamic property of honey**

Honey has hydrogen peroxide and gluconic acid which are antibacterial in action\(^{23}\). These two factors originated from dissolution of sugar by glucose oxidase of honey\(^{24-26}\). Honey also develops resistance against allergens remaining unaffected by them. Due to its high sugar content it has high osmotic pressure unfavourable to bacterial growth and proliferation. Its aromatic and phenolic compounds may contribute in overall antimicrobial activity\(^{27}\).

**Pharmacodynamic property of ghee**–

Ghee pacifies *Pitta* and *Vata*, ghee is beneficial for *rasa*, *sukra* (semen) and *Ojas*, it pacifies burning sensation, it softens body, and improves voice and complexion. Ghee has omega 6 and omega 3 fatty acid which are good for neurological health and brain development\(^{28}\).

**Benefits of Pushya Nakshtra**–Due to nourishing effect of Pushya Nakshtra all ayurvedic medicines are administered in this auspicious nakshtra\(^{29}\). The action of drug on this day is very fruitful. On this day body is in a better position to absorb the drugs for its optimum benefits and the drugs used are more potent than the usual. In ayurved this day is best for collection of drugs.

**IMMUNOMODULATION EFFECT OF SWARNA PRASHAN SANSKAR**–

A situation in which you are protected against disease is called body strength or we can say immuned. In ayurved it is coined by term *Vyadhikshamatva*. Body strength or immunity can be correlated with *Ojas* that is bala (strength) of the body. *Bala* is of three type *Sahajakalaja* and *Yuktikrita*. In *Yuktikrita bala* one can increase *Ojas* by Yukti. *Swarna prashan* is one of the methods which increase Sahaja bala or Ojas of the body without any adverse effect. A study was done on Madhu-Ghrita-Swarna-Vacha combination in infants, the study shows good response on immunological system by a rise in the total proteins and serum IgG levels\(^{30}\). Another pharmacological study was done on gold nano particles, which showed that gold nano particles modulate the immunological response when presented with an inflammatory challenge. These results indicate the therapeutic usage of nanoparticles in diseases which involve inflammatory challenges\(^{31}\). Several studies on gold nano particles reveal that it conjugates with antigen to influence the activation of T cell.
DISCUSSION

Brain development is continued up to 2 years and at this stage by Swarnaprashan Sansakar we can accelerate the growth of brain. According to Kashyapa Samhita administering Swarna to a child for one month, makes him Param Medhavi (super intelligent) and by administering for up to six months, person becomes Shruta Dhara (can remember whatever she/ he hears)\(^3^2\). As per literary review gold strengthens the body, beneficial for heart (hridya), good for eyes (chakshusaya), improves intellectual power, rejuvenative (rasayan), also helpful to cure many diseases as anemia, tuberculosis, diarrhea, colitis, heart disease, etc\(^3^3\). Many pharmacoclinical studies shows that gold nano particles helps in the activation of T cell, act as a drug carrier, has antioxidant and restorative property\(^3^4\). Gold has adjuvant property, it has immunomodulating effect. It improves the recurrent attacks of common cold, fever and reversible asthma. In malnourished children, Suvarnaprashana Sanskar may reduce the recurrent attacks of infections and help to improves digestive and metabolic power. So from the above discussion we can conclude that gold (swarna) has many physical and mental qualities that are beneficial for growing child as well as adult.

CONCLUSION

Swarnaprashan Sanskar provides multidimensional health by balancing the physical (Shareerik), mental(mansik) functions of the human body. SwarnaPrashana boosts the immunity as well as intellectual power of a child. Gold has anti-aging quality (Rasayana) and ability to target drugs to the site (yogavahi). Further clinical studies need to be undertaken to determine efficacy and safety profile of SwarnaPrashan in healthy and diseased children.
REFERENCES


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