



Scientific View towards *Suvarnaprashana* in Alternative Medicines

Chetan Gulhane^{1*}, Deepali Gulhane², Danga SK³, Ashita Surve⁴
and Kalpana Dhuri⁵

¹Panchakarma, IPGT & RA, Jamnagar.

²Department of Basic principles, Sian Ayurvedic collage, Mumbai, Maharashtra, India

³Kayachikitsa, Govt. Ayurveda College & Hospital, Nagpur, Maharashtra, India

⁴Kayachikitsa, YMT Ayurveda College, Mumbai, Maharashtra, India

⁵Basic Principles, IPGT & RA, Jamnagar, Gujarat, India

Abstract

Knowledge of metals and chemicals were known to Indians since the time of *Vedas*. In *Rugveda* it is said that Gold is the semen of *Agni*. It is the vigor and virility of *Agni*. Gold increases vigor and virility. Internal use of Gold was in vogue from the time of *Atharvaveda*. Correction of *Agni* (metabolic enzymes of body) is the main aim of Ayurvedic treatment. During that time it was used for *Medhajanan* (to improve cognition) for children and for begetting the desired sex of child for pregnant lady. *Suvarnaprashana* is one of 'Samskara' (rituals) in which a child is made to lick Gold, *Suvarnaprashana* improves intelligence, improves immunity and prevents bacterial and viral infections, digestive fire and physical power. It gives long, spiritual, holy and saintly life. Researches on Gold and Gold compounds in modern medicine and in alternative medicines, supports the *Suvarnaprashana* concept of *Ayurveda*.

Keywords

Gold, *Suvarnaprashana*, *Suvarna Bhasma*, *Vyadhikshamatva*



Greentree Group

Received 30/09/15 Accepted 24/10/15 Published 11/10/15



INTRODUCTION

There are three Indian systems of medicine *Ayurveda*, *Siddha* and *Unani-Tibb*. These systems utilize drugs of natural origin constituting plants, animals and mineral preparations. While research on medicinal plants has received considerable attention, the mineral preparations have relatively been neglected. Studies on the role of elements in health and disease have now become of global importance with spurt of research activity in the last two decades¹. The indigenous systems use mineral preparations mostly in calcined forms i.e., *Bhasmas* in *Ayurveda*. Traditional calcinations techniques are specialized processes wherein herbal juices are incorporated during preparation of ash, *Kushtas* in *Unani-Tibb* and '*Parpams*' in *Siddha*.

The usage includes even those elements which are otherwise considered toxic and not administered internally in modern medicine. One such metal is Gold. The application of Gold compounds to medicine is called "chrysotherapy" and "aurotherapy"². Two Gold preparations *Ayurvedic Swarna bhasma* and *Unani Kushta Tila Kalan* are claimed to possess general tonic,

hepatotonic, nervine tonic, cardio stimulant, aphrodisiac, detoxicant, anti-infective and anti-aging properties^{3,4}. In *Ayurvedic* system of medicine *Suvarnaprashana* is one of the sixteen '*Samskara*' (rituals) described in ancient Indian scriptural. To lick Gold by a child is originally *Suvarnaprashana*. '*Suvarnaprashana*' today is a mixture of Gold, *Ayurvedic* herbs, cow ghee and honey administered at a specific time i.e., *Pushya-Nakshatra*. *Suvarnaprashana* is given to children up to sixteen years of age including newborns. Six months of regular use of *Suvarnaprashana* make child very intelligent, and he can remember all heard by him, means it improves memory and intelligence miraculously⁵.

In *Unani* medicine calcined Gold preparation, *kushtatilankalan* (KTK), which shows analgesic activity against chemical, thermal, electrical and mechanical stimuli. In *Siddha* medicines are based mostly on herbs and metallurgy. Metals are converted by them into medicinal compounds in powder form or solid components of high potency. Some *Siddhas* make use of a *saltish* substance ('*muppu*' or universal salt), to prepare medicines. *Siddha* used '*Thanga Bhasmam*' or powdered Gold to get over the handicaps of old age. In modern medicine



Gold compounds (e.g. Gold disodium thiomalate and Auranofin) have been used in the treatment of rheumatoid arthritis for more than 60 years with well documented effects on immune function^{6,7}. Gold has been reported marked analgesic (elicited through opioidergic mechanisms) and immune-stimulant effects in these preparations with a wide margin of safety^{8,9}.

Concept of Suvarnaprashana:

Ayurvedic classic has given description related to the care of the new born like *Pranapratyagaman*. Acharya also describe the *Jatakarma Samskara*. *Jatakarma* means a birth ceremony (licking of medicines to the tongue of newly born child thrice after appropriate prayers)¹⁰. Acharyas mentioned *Lehana* formulations in *Jatakarma Samskara*. *Lehana* is the specialty of the *Kashyapa*, who has given special emphasis on *Lehanakarma*. *Lehana* preparations serve dual purpose. They fulfill the nutritional requirement of the body as well as they are used as supplementary foods. All the Acharyas mentioned the *Suvarna Bhasma* with or without herbs which are predominately acting on the CNS except *Charaka* who mentioned only *Madhu* and *Ghrita* combination, while other all Acharyas used *Madhu* and *Ghrita* as a

vehicle for medicine. *Swarna* has *Madhura rasa*, *Madhura vipaka*, *Shitaviryaya*, *Snigdha*, *Laghu gunas* and *Tridoshashamak* in action. It is primarily used as *Vrushya*, *Ayushya*, *Varnya*, *Balya*, *Dipana*, *Shwasa-Kasahara*, *Aruchi*, *Visham-jwara-nashaka*, *Brimhana*, *Vajikara*, *Rajyakshmahara*, *Ojo-wardhana*, *Pandu-nashan*, *Sarva-vishapaham*, *Granhnanyadi-doshanashanam*^{11,12}. In general practice drugs used for *Suvarnaprashana* are cow ghee, honey, *Vacha* (*Acoruscalamus Linn.*) and *Suvarna Churna* or *Bhasma*. It has been believed to increase the *Vyadhikshamatva* in the child. Concepts of ‘Vaccination’ and ‘Immunization’ of modern science can be correlated with the ‘*Vyadhikshamatva*’ concept of *Ayurveda*. In *Ayurveda* the term *Vyadhikshamatva* is used right from the period of *Charaka* to denote the functional principle of disease resistance.¹³ The term immunity is the nearest term that may be correlated with this. Another term which literally means strength or force is *Bala*. *Sushruta* and his commentator *Dalhana* used the term *Bala* to signify *Ojas* and stated that, ‘*Bala* is the power of the body, sufficient to resist the disease’¹⁴.

Benefits of Suvarnaprashana¹⁵



Strong immunity enhancer: *Suvarnaprashana* builds best resistant power and prevents infections and makes child stronger.

- *Suvarnaprashana* helps in physical development of your child.
- Memory Booster: It contains herbs which help your child for memory boosting and it improves grasping power also.
- Makes child active and intellect.
- Digestive Power: *Suvarnaprashana* is a best appetizer and has digestive properties.
- Improves skin colour and tone.

Recent researches on medicinal uses of Gold:

Some of the modern esotericism (esoteric beliefs) assign metallic Gold as a healing power and become alternative medicine. Some Gold salts have anti-inflammatory properties and are used as pharmaceuticals in the treatment of arthritis and other similar conditions.¹⁶ However, only salts and radioisotopes of Gold are of pharmacological value, as elemental (metallic) Gold is inert to all chemicals it encounters inside the body. In modern times, injectable Gold has been proven to help to reduce the pain and swelling of rheumatoid arthritis and tuberculosis.¹⁷ Colloidal Gold is

used in research applications in medicine, biology and materials science. The technique of immune Gold labelling immunogold labeling or immuno gold staining (IGS) is a staining technique used in electron microscopy. exploits the ability of the Gold particles to adsorb protein molecules onto their surfaces. Colloidal Gold particles coated with specific antibodies can be used as probes for the presence and position of antigens on the surfaces of cells.¹⁸ The isotope Gold-198, (half-life 2.7 days) is used in some cancer treatments and for treating other diseases.¹⁹

Pharmacological Studies of medicinal uses of Gold:

Analgesic activity- *Swarna Bhasma* was reported in one study involving mice. A *Unani* calcined Gold preparation, *kushtatilankalan* (KTK), was also used in this study along with the widely used Gold drug Auranofin. The study suggested involvement of opiodergenic mechanism in the observed analgesic activity of *Swarna Bhasma*.²⁰ The new Gold compound triethylphosphine Gold (auranofin) inhibits some type of experimental inflammation and the activity of various cells involved in inflammatory processes. In somecases auranofin exerts a higher influence.



Following incorporation of Gold in lysosomes, the impairment of macrophage function appears to be most important²¹.

Immune Response- Specific and nonspecific immune responses were modified in a positive manner in *Swarna bhasma* treated mice. *Swarna Bhasma* had a stimulatory effect on peritoneal macrophages, which may be helpful to fight against infections. It was suggested that macrophages achieved stimulation possibly due to presentation of the metal to cells in fine emulsified form²². The increase in the serum IgG level in the Gold compound group shows the immunological response of the rats against the antigenic material. IgG provides the majority of antibody-based immunity against invading pathogens²³.

Antioxidant Activity- The antioxidant and restorative effects of *Swarna Bhasma* in rats have recently been demonstrated. Auranofin and Goldsodium thiomalate (GST) are the peroxidation were studied. Two antioxidant enzymes superoxide dismutase (SOD) and catalase were measured after oxidative insult with acetic acid in *Swarna Bhasma*²⁴.

Anticancer activity- Gold compounds are reported to possess relevant anti-proliferative properties in vitro against selected human tumor cell lines, qualifying

themselves as excellent candidates for further pharmacological evaluation and Gold compounds as effective anticancer drugs²⁵.

Safety of Gold compounds: Acute oral administration (continuous for 8 weeks on albino mice; 10 mg/20g b.w./day) of *Swarna bhasma* had not reported any toxic effects as assessed by liver function tests and histological investigations²⁶.

DISCUSSION

Child mortality is a sensitive indicator of a country's development. In India, the Infant Mortality Rate (IMR) (under one year) has shown a modest decline in recent years. The report, 'Levels and Trends in Child Mortality 2014', found that India registered 1.34 million under-five deaths in 2013, the highest in the world²⁷. Mortality rate in India implicated through National Immunization Schedule is still high. Hence it is the need of the society to make available an immune modulatory agent which boosts up the immune system of body and prevents recurrent infections in infants. It should be palatable to child and cost convenient so that it will be affordable to all type of socio-economic classes. *Ayurveda* is the sciences in which total care



of new born and different *Samskaras* have been described which increase the *Vyadhikshamatva* in child. Most of the *Vaidyas* use pure Gold particles in the form of *Suvarna Bhasm*. It has been proven that Mono atomic Gold acts upon the pituitary gland, inducing an increase in hormonal production, and is thus a rejuvenation agent. Also in *Rugveda* it is said that Gold is the semen of *Agni*. Monoatomic Gold strengthens the heart, improves the production of red blood cells in the bone marrow and increases the production of semen²⁸. In Gold preparations nano particles of *Suvarna* can also be absorbed directly into the blood stream through sublingual route. *Acharyas* used different *Lehana* preparations for *Suvarnaprashana*. Gold nano particles are capable of encapsulating active drugs and targeting. This proves the *Yogavahi* property of *Suvarna*. This nano-technology has been used in treatment of brain malignancy. It is believed that the nanometre sized particles in colloidal Gold affect the electrical charges that are produced in neurons. It enhances the normal synaptic communication that takes place between the nerve cells. This enhancement is believed to be responsible for increased brain functions. The clinical study has been

going on etherium Gold (Monatomic White Gold) which increases the amplitude of alpha waves in the brain. Alpha brain waves are associated with greater intelligence, enhanced creativity and learning ability, improved mind/body coordination

The ancient *Ayurvedic* text ‘*Rasa-Jala-Nidhi*’ states: “Gold is soothing, pure, nutritive, curer of poison, phthisis, insanity and other diseases. Gold improves vitality, fortune, beauty, intelligence and memory. It destroys all sorts of diseases, pacifies the evil influences exerted on human beings by ghosts, is an aphrodisiac and gives rise to happiness and nutrition. It cures diseases, prevents senility, and removes loss of memory and consciousness. It also removes thinness, develops the mind, and increases semen²⁹.”

Mode of Action of *Swarnaprashana yoga*:

Vacha is *Medhya* and having Tranquilizer, Antimicrobial, Neuro-protective properties. Ghee has *Samskaranuvartanam*, *Medhya*, *Oja-Teja-Bala-Ayushya*, *vridhikar*, *Vrishya*, *Rakshoghna*, Immunostimulant activity. Acts as natural source of the fat soluble vitamins (Vit. A, D, K), traces of Fe, P, Cu, β carotene. *Swarna Bhasma* is *Vrushya*, *Ayushaya*, *Balya*, *Bruhana*, *Ojowardhana*, *Sarvavishapaham*,

Garaharam, Madhu has Sukshamarganusari, Yogavahi, and contains antigenic material – ‘Pollens. All these drugs are mixed together to produce an emulsified mixture like small fat globulins-chylomicrons which helps in absorption through the oral mucosa. Small quantities fatty acids, are absorbed directly into the portal blood rather than being converted into triglycerides and absorbed by lymphatics and intestinal epithelial cells allows direct diffusion into the capillary blood of the intestinal villa. Antigens in the honey are taken up by dendritic cells which interact with T lymphocyte striggering the Immunological response and body produces antibodies against antigen. Some drugs cross the Blood Brain Barriers and gives *Medhya* effect.

CONCLUSION

Researches in modern medicine and in alternative medicines support the *Suvarnaprashana* concept of *Ayurveda*. Recent immunization data shows that vaccinations and immunization schedules are not sufficient to control the diseases so there is need of science to improve the current immunization schedule with *Suvarnaprashana* in child.



REFERENCES

1. WHO. Trace Elements in Human Nutrition and Health, World Health Organization, Geneva, 1996.
2. Shaw III, C. F. (1999). "Gold-Based Medicinal Agents". Chemical Reviews 99 (9): 2589–600. doi:10.1021/cr980431o
3. Said M. Hamdard Pharmacopoeia of Eastern Medicine, pp. 233-234, Karachi, Hamdard Foundation, 1969.
4. Kabeeruddin, Wahid MA. Kitab-ul-Taqleesilm-e-Kushta-e Jat (Urdu), New Delhi, DarulKutubulMasseh, 1992, p.157- 8.
5. Vruddha jivaka, kashyap Samhita, sutrasthan,lehanadhya edited by pandit hemraj Sharma published by Choukhamba Sanskrit Prakashan, Banaras 2010, pg -5
6. James HL, Robert HP. Mechanism of action of gold. Agents and Actions 1981;11:460-572
7. Bloom JC, Thiem PA, Halper LK, Saunder LZ, Morgan DG. The effect of long term treatment with auranofin and gold sodium thiomalate on immune function of dog. J Rheumatology 1988;15:409-15
8. Bajaj S, Vohora SB. Analgesic effects of gold preparations used in Ayurveda and Unani-Tibb. Indian J Med Res 1998;108:104-11.
9. Bajaj S, Ahmad I, Fatima M, Raisuddin S, Vohora SB. Immunomodulatory activity of a Unani gold preparation used in Indian systems of medicine. ImmunopharmacolImmunotoxicol 1999;21:151-61.
10. Vagbhata, Astang Sangraha, comm..of Indu, Shashilekha, Uttar.1/16-19,edi. By Shivprasad Sharma, Varanasi: Chaukhamba Sanskrit Series Office,reprint 2006, P.no.629.
11. Sadanad Sharma, Rasatarngini, edi.by kashinath shastry,15/69-70,Motilal bansidas,Delhi,11thedi,2004, P.no.376.
12. Vagbhata, Rasaratnasammuchaya, Vidnayanbodhini edited by D.A.Kulkarni, New Delhi, MeherchandaLaxmikant Publications, 2007, P.no.95.
13. Agnivesha Charaka Samhita chakrapani Commentary, Sutra Sthana 28/7, ed by Jaydevajittrivikramji Acharya, Varanasi: Chaukhambha Sanskrit sansthan, reprint 2009,p.no.178.
14. Sushruta, Sushruta Samhita, comm. of Dalhana, Nibandhasamgraha, Sutrasthana 17/13 Ed by Vd. JadhavjiTrikamji Acharya, , Varanasi:Chaukhambha Sanskrit Sansthan, reprint 2009, p.no.83.
15. Vruddha jivaka, kashyap Samhita, sutrasthan, lehanadhya edited by pandit



hemraj Sharma published by Choukhamba Sanskrit Prakashan, Banaras 2010, pg -5

16. AB Messori, L.; Marcon, G. (2004). "Gold Complexes in the treatment of Rheumatoid Arthritis". In Sigel, Astrid. Metal ions and their complexes in medication. CRC Press. pp. 280–301. ISBN 9780824753511.

17. "BMJ: "login required"". Besthealth.bmj.com. Retrieved 2009-04-05.[dead link]

18. Roth, J; Bendayan, M; Orci, L (1980). "FITC-protein A-gold complex for light and electron microscopic immunocytochemistry". The journal of histochemistry and cytochemistry : official journal of the Histochemistry Society 28 (1): 55–7. doi:10.1177/28.1.6153194. PMID 6153194

19. Nanoscience and Nanotechnology in Nanomedicine: Hybrid Nanoparticles In Imaging and Therapy of Prostate Cancer – Radiopharmaceutical Sciences Institute, University of Missouri-Columbia.

20. Bajaj, S. and Vohora, S.B., Analgesic activity of gold preparations used in Ayurveda and Unani- Tibb, *Indian J. Med. Res.*, 108, 104, 1998

21. Jaun H. Wien *KlinWochenschr Suppl.* 1984;156:7-13.,www.pubmed.com retrived on 12/12/2009.

22. Bajaj, S., Ahmad, I., Fatima, M., Raisuddin, S., and Vohora, S.B., Immunomodulatory activity of a Unani gold preparations used in Indian system of medicine, *Immunopharmacol. Immunotoxicol.*,21, 151, 1999.

23. Gaikwad A S,Patel K S, Rajagopala S, ‘A Pharmaco-Clinical study of the effect of Madhu-Ghrita and Swarna-Vacha-Madhu-Ghrita on Neonates’2011

24. K Hashimoto, C E Whitehurst, T Matsubara, K Hirohata, and P E Lipsky, *J Clin Invest.* 1992 June; 89(6): 1839–1848. doi: 10.1172/JCI115788. PMID: PMC295882.www.pubmed.com, retrieved on 12/12/2009.

25. Liu, Wukun, and Ronald Gust. "Metal N-heterocyclic carbene complexes as potential antitumor metallodrugs." *Chemical Society Reviews* 42.2 (2013): 755-773.

26. Mitra A, Chakraborty S, Auddy B, Tripathi T, Sen S, Saha AV, *et al.* Evaluation of chemical constituents and free-radical scavenging activity of Swarnabhasma (gold ash), an *Ayurvedic* drug. *J Ethnopharmacol* 2002;80:147-53

27. India has the highest number of deaths among children below 5 available from

<http://www.ibnlive.com/news/india/india-has-the-highest-number-of-deaths-among-children-below-5-714352.html> (cited on 5 sep 2015)

28. AlchemiaNova Gem Elixir of Monoatomic Gold in Homeopathic Potency 1X

29. Mookerji, Kaviraj Bhudeb [Translator]: *Rasa-Jala-Nidhi or Ocean of Indian Chemistry & Alchemy*, vol. 2, Delhi 1990, Parimal publ., p. 239f