



A Critical Review On Therapeutic Uses Of Shankha Bhasma

Dr. Laxmi Narayan Gupta

Department of Rasa Shastra & Bhaishajya Kalpana, Faculty of Ayurveda, IMS, BHU, Varanasi

Abstract- Shankha is one of the Calcium-enriched animal origin marine materials used in Ayurvedic practice in form of Shankha bhasma, known by the Indians since vedic period, but its internal application as a medicine has been recognised from Charak Samhita period. Rasa Tarangini (a classical 20th century book on Ayurvedic pharmaceutical medicine) has detailed elaborative description of the pharmaceutical processing of Shankha to derive its Bhasma. It is used since ancient Indians to treat various ailments like Ajirna (indigestion), Agnimandhya (decreased enzymatic secretion), Amlapitta (acidity), Grahani (irritable bowel syndrome) etc. The present study is designed to compile and accesses all the relevant and standard work done related to Shankha bhasma preparation in addition to standardization in terms of its pharmaceutical and analytical parameters. Relevant literatures of ancient India related to ayurvedic pharmaceuticals for preparation of SB along with contemporary research databases and various other appropriate contents on the internet were thoroughly searched. This work may provide an insight into its potential effect in characterization and therapeutics, eventually leading to betterment of human life.

Keywords- Shankha, Bhasma, Ajirna, Agnimandhya, Amlapitta, Grahani.

Introduction- Shankha bhasma is one of the extensively used ayurvedic formulation constituting the calcinated conch which was placed in the Sudha Varga in Classical Rasa text. In Rasa Tarangini, two types of Shankha are mentioned: Dakshinavarta (Dextrorotated) & Vamavarta (Levorotated). Dakshinavarta Shankha has been used in the worship of God, whereas Vamavarta Shankha is very common and found the world over⁽¹⁾. So it is therapeutically useful for preparing Shankha bhasma. Classical Rasa Text mentioned about pharmaceutical processing of Shankha bhasma, such as Shodhana and Marana.

Table 1: Shankha at a Glance

1.	Synonyms	Shankha, Shankhaka, Kambu, Trirekha, Samudraja, Sunada, Dirghnada, Kamboja ⁽²⁾ , Kshudra, Shankhanaka ⁽³⁾ .
2.	English Name	Conch Shell
3.	Chemical Name	Calcium carbonate (CaCO ₃)
4.	Varna (color)	Shweta varna looks like Moon ⁽⁴⁾
5.	Grahya Swarupa	Golakara (round), Snigdha (smooth), Sukshma Mukha, Guru (5)
6.	Types	(a) Dakshinavarta (Right faced is best for yoga and spiritual work) (b) Vamavarta (Left faced is used for medicinal purposes) ⁽⁶⁾
7.	Shodhana	Svedana in dola yantra containing Amla Rasa (Jambiri Swarasa for four prahara) & (Jayanti Swarasa, Tanduliya Swarasa, Kanji for one prahara) (7).
8.	Marana	Shuddha Shankha is set into small pieces and kept inside the sarava, fire in Gaja puta system of heating, after self cooling subjected to bhavana with Ghrita kumari swarasa, made into pillets and kept inside the sarava, sealed then dried and fired in Gaja puta. Finally after self cooling white color Shankhabhasma obtained (8).
9.	Dose	2 Ratti ⁽⁹⁾
10.	Guna Karma	Kshariya, Sheeta, Grahi, Sangrahani nashaka, Netrapushpahara, Varnya, Yuvanapidikahara etc. ⁽¹⁰⁾
12.	Anupana	Nimbu swarasa, Trikatu churna, Amalaki churna, Haldi churna ⁽¹¹⁾

Table 2: Formulations containing Shankha Bhasma and their Uses

S. No	Formulation	Ingredient Metals/Minerals	Ingredients Herbal/Others	Processed in	Indication
1.	Agnikumara Rasa (B.R. 10/115-116)	Shu. Parada, Shu. Gandhaka, Shu. Tankana, Kaparda & Shankhabhasma	Shu. Vatsanabha, Maricha Churna	Jambiri Nimbu swarasa	Visuchika, Ajirna, Grahani
2.	Agnisandipana Rasa (B.R.10/132-139)	Shu. Parada, Shu. Gandhaka, Loha, Abhraka, Vanga Shankhabhasma & Shu. Tankana	Pippali, Chavya, Pippalimoola, Chitraka, Shunthi, Maricha, Panchalavana, Swarjikshara, Yavakshara, Sweta & Krishna Jiraka, Ajmoda, Hingu Ajwaina, Saunfa etc.	Panchakol kwatha, Chitraka kwatha, Apamarga kwatha, Amlaloni swarasa, Nimbu swarasa	Mandagni, Ajirna, Amlapitta, Shoola, Gulma
3.	Apoorvamalinivasanta Rasa (B.R.37/184-186)	Swarnamakshika, Vaikranta, Pravala, Rasasindura, Tamra, Abhraka, Rajata, Loha, Vanga, Shankhabhasma & Shu. Tankana	Kasturi, Karpura	Shatavari & Haridra kwatha	Prameha, Jirnajwara, Mutrakrichha, Asmari
4.	Bhaskara	Shu. Parada, Shu.	Shu. Vatsanabha,	Jambiri	Shoola,

	Rasa (B.R.10/128-131)	Gandhaka, Shu. Tankana, Loha, Abhraka, Varatika & Shankhabhasma	Trikatu, Jaiphala, Sweta Jiraka, Launga	Nimbu swarasa	Visuchika, Agnimandya
5.	Chandrodaya Varti (S.S.U.K. 13/75-77)	Shankha Nabhi, Manahshila	Vibhitaka, Pathya, Pippali, Maricha, Kushtha, Vacha	Goat Milk	Timira, Kacha, MansaVridhi, Patala, Arbuda, Ratryandhya
6.	Dwitiya Indrokta Rasayana (Ch. Chi. 1-4/13-26)	Swarna, Rajata, Tamra, Pravala, Sphatika, Mukta, Vaidurya & Shankhabhasma	Vijayasara, Khadira, Kharjura, Madhuka, Musta, Nilakamala, Munakka, Vidanga, Vacha, Chitraka, Shatavari, Triphala, Kshiravidari, Pippali, Riddhi, Agara, Nagabala, Dwarada, Dhava, Vidarikanda, Palasha, Amala	Godugdha, Goghrita, Tila Taila	Smriti, Indriyabalap rada,
7.	Grahanigajen dravatika (B.R.8/274-280)	Shu. Parada, Shu. Gandhaka, Shu. Tankana, Swarna, Mukta, Abhraka, Varatika, & Shankhabhasma	Shu. Vatsanabha	Ativisha kwatha	Grahani, Jwara, Atisara, Arsha, Aruchi, Prameha, Mutrakriccha
8.	Hemgarbhapottali Rasa (S.S.U.K. 12/107-113)	Shu. Parada, Shu. Gandhaka, Shu. Kanaka, Mukta, Shu. Tankana & Shankhabhasma		Nimbu rasa	Kasa, Swasa, Grahani, Atisara
9.	Lauhamrityunjaya Rasa (B.R.41/112-116)	Shu. Parada, Shu. Gandhaka, Shu. Manahshila, Shu. Tuttha, Rasanjana, Loha, Abhraka, Tamra, Varatika & Shankhabhasma	Shu. Kupilu, Jaiphala, Kutaki, Yavakshara, Swarjikakshara, Dhatturabija, Trikatu, Shu. Hingu, Saindhavalavana	Suryavarta swarasa, Bilwapatra swarasa	Pliha Yakriti Vridhi, Gulma, Udaravikara, Shotha, Vatarakta
10.	Lekhanajana (S.S.U.K.13/106)	Shell of Hen's egg, Manahsila, Kacha, Shankha, Saindhavalavana	Chandan		Pushpa (Scar), Arm (Pterygium)
11.	Lokanath Rasa (S.S.M.K. 12/59-83)	Shu. Parada, Shu. Gandhaka, Kapardika, Shu. Tankana, Small pieces of Shankha		Godugdha	Atisara, Aruchi, Grahani, Mandagni, Kasa, Swasa, Gulma
12.	Mahamrityunjaya lauha	Shu. Parada, Shu. Gandhaka, Shu.	Yavakshara, Swarjikakshara,	Adraka swarasa,	Plihavridhi, Ugrajwara,

	(B.R.41/136-145)	Manahshila, Shu. Haratala, Shu. Tuttha, Loha, Abhraka, Tamra, Varatika & Shankhabhasma	Apamargakshara, Vidalavana, Kutaki, Saindhavalavana, Chitraka, Nishotha, Indrayana, Haridra, Daruharidra etc.	Guduchi swarasa	Kasa, Swasa, Amavata, Arsha, Gulma, Shotha, Panduroga
13.	Mriganka Pottali Rasa (R.R.S. 14/18-20)	Shankha Churna, Rasa Sindoor, Shuddha Gandhaka		Godugdha	Kshaya
14.	Muktadi Churna (Ch. Chi. 17/125-128)	Shu. Gandhaka, Mukta, Praval, Vaidurya, Sphatika, Anjana, Tamra, Loha, Rajata, Sougandhika, Souviranjana & Shankhabhasma	Madara, Choti Ela, Saindhavalavana, Souvarchallavana, Jayaphala, Shana, Apamarga		Hikka, Swasa, Kasa, Timira, Nilika, Abhishyanda, Arma
15.	Muktapanchamrita Rasa (B.R.14/219-221)	Mukta, Pravala, Vanga, Shukti & Shankhabhasma		Ikharasa, Godugdha Shatavari, Tulsipatra, Ghritakumariswarasa	Jirnajwara, Kshyaroga
16.	Pravalapanchamrita Rasa (B.R.32/116-117)	Mukta, Pravala, Varatika, Shukti & Shankhabhasma		Arka dugdha	Plihavridhi, Kasa, Swasa, Ajirna, Atisar, Prameha, Mutrakriccha, Gulma, Ashmari, Udararoga
17.	Purnachandra Rasa (R.R.S. 27/23-25)	Shu. Parada, Shu. Gandhaka, Shu. Mandurachurna, Mukta & Shankhabhasma		Ashwagandha kwatha, Guduchi kwatha, Yashtimadhukwatha, Vidarikandakwatha	Grahani, Arsha, Pittaroga
18.	Ratna Garbha Pottali (B.R.14/178-180)	Rasasindura, Hiraka, Swarna, Rajata, Tamra, Swarnamakshika, Loha, Mukta, Pravala, Shankha bhasma & Shu.Tuttha	Maricha Churna	Chitraka kwatha, Arka dugdha, Nirgundi patra swarasa, Adraka swarasa	All types of Jwara, Kasa, Rajayakshama, Arsha, Ashmari, Kushtha, Prameha, Udararoga, Swasa,

					Atisara
19.	Romasatana Lepa(S.S.U. K.11/35-37)	Shankha Churna, Haratala, Manahshila,	Swarjika Kshara	Water	Prevent the Growth of Hair
20.	Sarvangasundara rasa (B.R. 14/195-201)	Shu. Parada, Shu. Gandhaka, Shu. Tankana, Shu. Hingula, Mukta, Pravala, Swarna, Tikshna Lauha & Shankhabhasma		Nimbu swarasa	Rajyajashkma, Arsha, Prameha, Gulma, Bhagandara
21.	Shankha Vati (B. R. 10/187)	Shu. Parada, Shu. Gandhaka, Shu. Tankana, Shu. Haratala, Lauha, Tamra, Tuttha, Vanga & Shankhabhasma,	Lavanga churna, Dantimula churna, Nishotha churna, Ajamoda churna, Sudha vatsanabha Ajvayien, Yavakshara churna, Sarjikshara churna, saindhava, Maricha churna Panchalavana	Ardraka swarasa, Panchakola phanta, Guduchi swarasa	Pleehavidhi Pandu roga, Prameha, Visthambha, Grahani, Arsha, Kasa, Swasa, Pratishtay, Yakshma, Amlapitta, Shoola, Bhagandara, Udararoga,
22.	Sankha Dravaka Rasa (B.R. 41/167-174)	Shankha bhasma, Shu. Sphatika, Yava Kshara, Sarji Kshara, Tankana Kshara, Panchalavana			Udara roga, Gulma, Plihodara, Ajirna, Grahani, Vishuchika
23.	Shankha Dravaka (R.T. 12/35-42)	Shu. Shankha churna, Tankana, Alum, Suhaga, Swarjika Kshara, Yava kshara, Nauvsadara, Panchalavana			Agnimandya, Visuchika, Udararoga, Gulma, Pliha, Arsha, Mutrakriccha
24.	Shankha Kalpa (R.T. 12/30-34)	Kajjali, Varatika & Shankhabhasma,	Pippali churna	Nimbu swarasa	Sangrahani, Shula, Gulma, Udararoga
25.	Shankheswara Rasa (R.R.S. 14/24-25)	Rasa Sindoor, Tankana, Shu. Ghandhaka, Varatika, Tuttha, Naga & Shankhabhasma,		Goat Milk	Rajyakshama
26.	Shankha Varti (R.T. 12/16)	Shu. Shankha churna, Saindhavalavana, Samudraphena	Shigrubeeja churna	Water	Netraroga
27.	Trirekha Vartika(R.T. 12/12-14)	Shu. Manahshila, Shu. Shankha churna	Pippali Churna, Kali Maricha Churna,	Water	Timir, Netrarjuna

Discussion

Quality control and standardization is an important step in drug development. Several herbal or metal-mineral based drugs are being developed in the past decades apart from classical medicines⁽¹²⁻³¹⁾. Shankha (Conch Shell) is known since Vedic period, but its internal application as medicine has recognized from Samhita period. Specific description about its therapeutic use has not been made available during Vedic period. However in Samhita period Shankha has been used as a ingredient in few formulations. But during the Nighantus period systemic and detailed description about identification, verities, Shodhana, Marana, physical properties and therapeutic indications of Shankha bhasma are mentioned. In this study, it is found that Shankha Bhasma is a therapeutic agent with high pharmacological and therapeutic properties. In Rasa Shastra literatures so many formulations of Shankha Bhasma are described in the context of treatment of diseases like Udara roga, Grahani, Gulma, Agnimandya, Amlapitta, Parinamashoola, Swasa, Vamana, Vishuchika, Arsha, Kushtha, Prameha, Netraroga and other chronic disease.

Conclusion

Shankha is one of the calcium enriched animal origin material used in Ayurvedic practice and have a wide range of therapeutic efficacy in acute and chronic diseases. It is frequently used in the form of bhasma with other herbomineral drugs mainly in the treatment Udara roga, Gulma, Rajyakshma, Kasa, Swasa, Arsha, Ajirna, Grahani etc. It was observed in this review study that maximum number of above mentioned formulations having Shankha bhasma mainly indicated in Udara roga, Gulma, Ajirna, Arsha & Grahani.

Reference

1. Sharma S, Rasatarangini, In: Shastry K, editor. 11th ed. New Delhi, India: Motilal Banarasidas; 2004,12/3-5,p.285.
2. Sharma S, Rasatarangini, In: Shastry K, editor. 11th ed. New Delhi, India: Motilal Banarasidas; 2004,12/1,p.285.
3. Sharma Mishra G, Ayurveda Prakash, In: Sharma S, editor. Varanasi, India: Chaukhambha Bharati Academy; 2007, 2/259, p.323.
4. Sharma S, Rasatarangini, In: Shastry K, editor. 11th ed. New Delhi, India: Motilal Banarasidas; 2004,12/2,p.285.
5. Sharma S, Rasatarangini, In: Shastry K, editor. 11th ed. New Delhi, India: Motilal Banarasidas; 2004,12/2,p.285.
6. Sharma S, Rasatarangini, In: Shastry K, editor. 11th ed. New Delhi, India: Motilal Banarasidas; 2004, 12/3-5,p.285.
7. Sharma S, Rasatarangini, In: Shastry K, editor. 11th ed. New Delhi, India: Motilal Banarasidas; 2004,12/6-10,p.285-286.
8. Sharma S, Rasatarangini, In: Shastry K, editor. 11th ed. New Delhi, India: Motilal Banarasidas; 2004,12/17-19,p.287-288.
9. Sharma S, Rasatarangini, In: Shastry K, editor. 11th ed. New Delhi, India: Motilal Banarasidas; 2004,12/21,p.288.

10. Sharma Mishra G, Ayurveda Prakash, In: Sharma S, editor. Varanasi, India: Chaukhambha Bharati Academy; 2007, 2/262, p.323.
11. Sharma S, Rasatarangini, In: Shastry K, editor. 11th ed. New Delhi, India: Motilal Banarasidas; 2004,12/22-29,p.288-289.
12. Sharma R, Amin H, Prajapati PK. Validation of standard manufacturing procedure of Guḍūcī sattva (aqueous extract of *Tinospora cordifolia* (Willd.) Miers) and its tablets. *Ancient science of life*. 2013 Jul;33(1):27.
13. Sharma R, Galib R, Prajapati PK. Validation of standard manufacturing procedure of Guduchi Ghana [dried aqueous extract of *Tinospora cordifolia* (Willd.) Miers] and its tablets. *Ayurpharm Int J Ayurveda Allied Sci*. 2013;2(7):224-32.
14. Sharma R, Hazra J, Prajapati PK. Nanophytomedicines: A novel approach to improve drug delivery and pharmacokinetics of herbal medicine. *Bio Bull*. 2017;3(1):132-5.
15. Prajapati PK, Sharma R, Amrutia A, Patgiri BJ. Physicochemical screening and shelf life evaluation of Kuṅkumādi Ghṛta prepared using Kesara and Nāgakesara. *Ancient Science of Life*. 2017 Jan;36(3):129.
16. Sharma R, Kakodkar P, Kabra A, Prajapati PK. Golden ager Chyawanprash with meager evidential base from human clinical trials. *Evidence-Based Complementary and Alternative Medicine*. 2022 May 16;2022:1-6.
17. Kakodkar P, Sharma R, Dubewar AP. Classical vs commercial: Is the 'efficacy' of chyawanprash lost when tradition is replaced by modernization?. *Journal of Ayurveda and Integrative Medicine*. 2021 Oct;12(4):751.
18. Sharma R, Hazra J, Prajapati PK. Knowledge and awareness of pharmacovigilance among ayurveda physicians in Himachal Pradesh. *Ancient science of life*. 2017 Apr;36(4):234.
19. Sharma R, Galib R, Prajapati PK. Good pharmacovigilance practice: Accountability of Ayurvedic pharmaceutical companies. *Ancient science of life*. 2017 Jan;36(3):167.
20. Chouke PB, Shrirame T, Potbhare AK, Mondal A, Chaudhary AR, Mondal S, Thakare SR, Nepovimova E, Valis M, Kuca K, Sharma R. Bioinspired metal/metal oxide nanoparticles: A road map to potential applications. *Materials Today Advances*. 2022 Dec 1;16:100314.
21. Chaudhary P, Sharma R, Rawat S, Janmeda P. Antipyretic medicinal plants, phytocompounds, and green nanoparticles: an updated review. *Current Pharmaceutical Biotechnology*. 2023 Jan 1;24(1):23-49.
22. Rhaman MM, Islam MR, Akash S, Mim M, Nepovimova E, Valis M, Kuca K, Sharma R. Exploring the role of nanomedicines for the therapeutic approach of central nervous system dysfunction: At a glance. *Frontiers in Cell and Developmental Biology*. 2022 Sep 2;10:989471.
23. Rahman MM, Ahmed L, Anika F, Riya AA, Kali SK, Rauf A, Sharma R. Bioinorganic Nanoparticles for the Remediation of Environmental Pollution: Critical Appraisal and Potential Avenues. *Bioinorganic Chemistry and Applications*. 2023 Apr 10;2023.
24. Yerpude ST, Potbhare AK, Bhilkar P, Rai AR, Singh RP, Abdala AA, Adhikari R, Sharma R, Chaudhary RG. Biomedical, clinical and environmental applications of platinum-based nanohybrids: An updated review. *Environ Res*. 2023 Aug 15;231(Pt 2):116148. doi: 10.1016/j.envres.2023.116148. Epub 2023 May 19. PMID: 37211181.
25. Ali MK, Javaid S, Afzal H, Zafar I, Fayyaz K, Ain QU, Rather MA, Hossain MJ, Rashid S, Khan KA, Sharma R. Exploring the multifunctional roles of quantum dots for unlocking the future of biology and medicine. *Environ Res*. 2023 Jun 7;232:116290. doi: 10.1016/j.envres.2023.116290. Epub ahead of print. PMID: 37295589.
26. Tamboli QY, Patange SM, Mohanta YK, Sharma R, Zakde KR. Green synthesis of cobalt ferrite nanoparticles: an emerging material for environmental and biomedical applications. *Journal of Nanomaterials*. 2023 Feb 6;2023.
27. Sharma R, Bedarkar P, Timalina D, Chaudhary A, Prajapati PK. Bhavana, an ayurvedic pharmaceutical method and a versatile drug delivery platform to prepare potentiated micro-nano-sized drugs: core concept and its current relevance. *Bioinorganic Chemistry and Applications*. 2022

Apr 29;2022.

28. Sharma R, Prajapati PK. Nanotechnology in medicine: Leads from Ayurveda. J Pharm Bioallied Sci. 2016 Jan 1;8(1):80-1.
29. Sharma R, Prajapati PK. Predictive, preventive and personalized medicine: leads from ayurvedic concept of Prakriti (human constitution). Current Pharmacology Reports. 2020 Dec;6(6):441-50.
30. Sharma R, Pk P. Diet and lifestyle guidelines for diabetes: Evidence based ayurvedic perspective. Romanian J Diab Nutr Metabol Dis. 2014;21(4): 335–346.

