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Review Article

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GANDHAKA AND KUSHTA

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ABSTRACT

Health and disease are always interlinked. Nowadays Ayurveda attains more global acceptance because of its wonderful results. The traditional Ayurveda system is showing magical results in skin diseases. Gandhaka is commonly known as Sulphur. Gandhaka (Sulphur) is one of the most common medicine while treating kushta (Skin diseases). It can be used internally as well as externally.

KEYWORDS: *Gandhaka, Kushta.*

INTRODUCTION

The world is focused on natural sources for maintaining health and curing diseases. Ayurveda can contribute a lot in such situations to improve the quality of life. The art of converting poisonous metal and minerals to medicine is the wonder of Ayurveda. Rasashastra is an

emerging field in Ayurveda that enhances the magic of deha vada (Converting metal and minerals to medicine for treating diseases). Alpamatra (Smaller dosage), aruche aprasangatha (Tastelessness), kshipram arogyadayitwat^[1] (Quick action) are the benefits of rasoushadhis.

Sulphur is known as gandhaka in Ayurveda. The mythological origin of gandhaka is from sivangi raja (Ovum of goddess Parvati). [2] Gandhaka is the first mineral drug in uparasa [3] varga. It is a multivalent non-metal that is found in its native form in the crystalline structure. Sulphur is important for the normal function of the body. Gandhaka is having madhura^[4] (sweet) rasa, katu vipaka, ushna veerya and rasayana properties (Rejuvenating). Kushtaroga

leads to dhathukshaya so rasayana is needed. It is deepana (appetizer) and pachana (digestive) in action because in kushta roga there is a chance of impaired agni and ama. Gandhaka pacifies kandu, kushta, visarpa, dadru.

Sudha gandhaka is indicated in different types of skin diseases. It helps to delay ageing and death and helps to improve appetite. [5] It is garavisha hara. Garavisha will cause skin diseases. It is useful in kshudra kushta, dadru.

Ayurveda prakasha classified gandhaka into 4 types. Sukatundanibha, sukapicha, swetha khatika, Krishna. [6] Sukachanchukanibha, pitavarna, swetha varna are types of gandhaka by rasarnava^[7] and rasaratna samuchaya.^[8]

Properties	Rasa ratna	Ayurveda prakasha ^[10]	Rasa tarangini ^[11]
	samuchaya ^[9]		
Rasa	Madhura	Katu, Tikta	Katu
Virya	Ushna	Ushna	Ushna
Vipaka	Katu	Katu	Katu
Karma	Rasayana, Deepana	Kapha vata hara,	Rasayana, Deepana
		Pittakara, Rasayana	
Rogaghna	Kanduhara,	Kanduhara,	Gravishahara,
	Kushtahara,	Visarpahara,	Twagdoshahara,
	Visarpahara,	Krimihara,	Kasaswasa hara
	Adhmanahara,	Kushtahara, Plihahara	
	Krimighna		

Sulphur increases bile secretion. It acts as a laxative. Its alternate preparations are diuretic and insecticide. In the intestine, sulphur is converted into sulphide, which mildly irritates the intestine especially the large intestine and acts as purgative. External use of gandhaka shows parasitic activity. The sulphur acts as a fungicide which leads to the formation of hydrogen sulphide and pentatonic acid. Improper usage of gandhaka in the open wound will destroy tissues.

Sulphur and Skin disease

Sulphur plays important role in protein synthesis. Keratin is a protein that contains high sulphur, which is important for hair and nail. Sulphur containing proteins is a structural component of the outer layer of human skin. Sulphur is essential for collagen formation. Collagen is giving strength and structure to the skin. Sulphur is needed for the synthesis of glutathione which is an antioxidant that inhibits the oxidation of other molecules and

preventing cell damage. It helps to dry out the surface of your skin to help absorb serum that may contribute to acne breakouts.

Sulphur is having antibacterial action. Sulphur prohibits new bacteria from growth and spread. It works by reducing inflammation and killing bacteria.

Sulphur is having antifungal properties, it limits or prevents the growth of fungal organisms. It shows antibacterial character by destroying bacteria or suppresses their growth or their ability to reproduce. Sulphur is keratolytic, and produce mild shedding of the top layer of skin. This clears away dead skin cells that can contribute to clogged pores, breakouts, uneven texture and dullness. Separation or loosening of the horny layer of the epidermis is caused by sulphur. Sulphur helps for loosening and shedding of skin. It is having an inhibitory action on streptococcus and staphylococcus.

One-third of the human body consists of collagen, which is a dense insolvable fibrous protein. Collagen molecules are packed together. Collagen gives strength and elasticity to the skin. Vitamin B helps to maintain healthy skin cells. Vitamin B2 helps to maintain skin tone and helps to improve skin health. It helps in the production of new skin cells. Vitamin B3 helps to prevent skin discolouration. Folic acid improves skin health. Vitamin B5 is having action in age-related skin issues.

Sulphur is having keratoplastic properties. Keratin helps for the formation of tissues of the hair, nail, and outer layer of skin. Sulphur promotes keratinization and thickening of the keratin layer. It slows down the epidermal cell proliferation by a cystostatic effect on the basal layer. Penthathionic acid and hydrogen sulphide are formed and cause damage to corneocytes and subsequent softening of the stratum corneum and shedding of cells. Exfoliative property is shown by sulphur. That means the removal of dead skin cells from the skins outermost surface. It helps to reduce skin buildup, making it an effective treatment for scalp issues.

When sulphur is applied over the skin. It reacts with cysteine in stratum corneum and hydrogen sulphide forms, and hydrogen sulphide breakdown keratin and this keratolytic effect may promote fungal shedding from stratum corneum. Natural collagen formation takes place with the help of sulphur. As we age sulphur is depleted, leaving skin vulnerable to free radical damage and breakdown of collagen, which leads to wrinkles and sagging. Harmful bacteria can also damage skin and accelerate the ageing process.

CONCLUSION

Gandhaka cant neglect while treating skin disease. Classical and patent medicines which are used to cure skin disease contain gandhaka. It is having broadspectrum action in kushta chikitsa. In different forms, gandhaka can be used in skin diseases. Sulphur is required in the human body for its normal functioning. Sulphur plays important role in maintaining skin health.

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