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TO STUDY THE ROLE OF MEDHYA RASAYANA (ASHWAGANDHA, BRAMHI, GUDUCHI ETC.) WHICH ARE ADMINISTERED TO CHRONIC SKIN DISEASE.

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ABSTRACT

Human skin, the outer covering of the body, is the largest organ in the body. It also constitutes the first line of defense. According to Ayurveda, the skin is one of the essential sense organs. Ayurveda has its own unique principles of diagnosis and treatment of various skin diseases under the heading of *kuṣṭha*. When we consider the prevalence of various diseases, every year, worldwide near about 20% of the total number of patients seeking medical advice suffer from skin diseases including cosmetic problems. In present article we are discussing regarding the role of medhya rasayana (ashwagandha, bramhi, guduchi etc.) which are administered to chronic skin disease.

INTRODUCTION

Oxidative stress constitutes an alteration that is encountered when there is an imbalance between the production of reactive oxygen species (ROS) and the ability of the biological system to readily detoxify these reactive intermediates or easily repair the resulting damage. ROS can be a result of environmental insults, like cigaret smoking and ionizing irradiation but majority of ROS are produced in the normal functioning of the body, from intracellular sources (Sastre et al., 2000; Ames, 2004). Sources of one-electron reduction product of molecular oxygen include Fenton reaction, Haber–Weiss reaction, NAD(P)H oxidases (NOX), xanthine oxidase (XO), mieloperoxidase, cytochrome P450, mitochondria, and uncoupled nitric oxide synthase. Additionally peroxy nitrite that yields secondary one-electron oxidants has been implicated in cellular damage (Radi et al., 2001).

The incidence of skin Diseases increasing due to the following factors-

- Faulty diet and daily regime; taking of incompatible and unwholesome foods; taking of meals before the previous meal has been digested; taking milk along with meats, fish (aquatic animals); bathing immediately after exposure to the sun or after physical exertion) etc.
- Excessive and improper use of chemicals, cosmetics, soap, shampoo, deodorants etc.

- Unhygienic practices
- Unnecessary and Overuse of antibiotics and Steroids

Principles of treatment of skin diseases

- *Punaha-Punaha Shodhana* in *Bahudoshajanya Tvak roga* (dermatological disorders)
- After *Shodhana* and *Raktamokshana*, *Ghritapana* is essential to prevent *Vata Prakopa*
- *Lepa Prayoga*- after *Shodhana* and *Raktamokshana*

Good Clinical Practice (GCP) guidelines

- Accurate diagnosis is must for quick and complete results.
- *Nidana Parivarjana* (avoidance of causative factors).
- For all chronic skin diseases, *Shodhana* (*Bio-purification*) is essential.
- Then disease specific *Rasayana* (anti-oxidant & immune-modulator) and *Shamana Aushadhi* (palliative medicines).
- Psychogenic stresses and emotional conflicts act as causative factors of a few skin diseases. In the management of such conditions, patients' minds should be set at rest by using some Yogic Practice and also by prescribing some *Medhya Rasayana* (Nootropic) drugs.

- *Medhya Rasayana* (*Ashwagandha*, *Bramhi*, *Guduchi* etc.) should be given to patients having chronic skin disease.
- *Rasa Aushadhi* (mineral preparations) especially *Malla* (Arsenic), *Naga* (Lead) etc. should not be given for a longer period (more than 45 days). Give hepato-protective and nephro-protective drugs then again may restart after 15 days, if needed.
- Prescribe *Asava-Arishta* (Herbal fermented preparation) in elderly patients having poor digestion.
- While prescribing *Guggulu kalpana* (*Commiphora mukul* preparations), it is wise to advise the patient to crush the pill.
- Topical therapy is delivered by various vehicles, most frequently soaks, lotions, solutions, creams and ointments, progressing in that order from least to most hydrating.
- Animal oils penetrate the skin best, vegetable oils less and mineral oils the least.
- Irritant drugs must be tested in a small area before applying them to a generalized lesion, otherwise severe allergic reaction may occur in *Pitta* Prakriti Person. For e.g., *Bakuchi Lepa* in *Switra* (vitiligo).
- Avoid the use of irritant drug applications in pregnant women, children, old aged persons, as the skin is very soft & sensitive.
- Avoid irritant drugs application to sensitive area scrotum, genital area, eyelid, lips etc. Oils and oil-based

medications should be avoided in the acute stage.

- Before using the *lepa yoga* (external application), rubbing with rough leaves such as *Gojihvā* and *Gomaya*, *Samudraphena* should be used. This helps in increasing the local blood supply & thus absorption.
- Intake of adequate quantities of water/ liquid must be done daily.
- Green vegetables and seasonal fruits should be taken sufficiently.
- Non-vegetarian, oily diet, fast/ junk food should be avoided.

Patients with *Kushta* (dermatological disorders) approach various health care systems with a hope to get a cure. Diseases of the skin account for a great deal of miseries, suffering, incapacity and economic loss. Patients with certain skin diseases, who do not get a cure from the Western Medicine, come to Ayurveda treatment with a great hope of curing their disease. By the time they approach an Ayurvedic physician for treatment, disease seems to have attained chronic state, thus making the treatment further difficult.

All Acharyas have emphasized on *Shodhana* therapy for the management of *Kushta*. The therapy which expels out the morbid *doshas* from the body is known as *Shodhana*. By nature, *Kushta* is difficult to cure, but by the application of *Shodhana* therapy, cure of the diseases becomes easier due to removal of the root cause, hence *Shodhana* has great importance

in *Bahudoshavastha* (multifactorial condition).

According to Acharya Sushruta, *Vamana* (medicated emesis) should be administered once in every fortnight; *Virechana* (medicated purgation) once in a month; *Raktamokshna* (blood-letting) should be done twice in a year and *Nasya* (Nasal installation) once in three days in a chronic case of *Kushta* considering the involvement and strength of *dosha-dushyavastha*. 1

According to Acharya Charaka, the patient suffering from *Kushta* dominated by *Vata* should first be administered *Ghrita* internally. The patient suffering from *Kushta* dominated by *Kapha* should first be administered *Vamana* therapy. The patient suffering from *Kushta* dominated by *Pitta* should first be administered *Virechana* therapy for optimum result. 2

Drugs of *tikta varga* (bitter taste herbs) such as *Aragvadhadi Kwath*, *Manjisthadi Kwath*, *Patoladi Kwath*, *Nimbadi Kwath*, *Panchanimba Churna*, *Guducyadi Lauha/Kasaya*, *Lavan Bhaskar Churna*, *Haridra Khanda*, *Giloy Satwa*, *Rasamanikya*, *Khadirarista*, *Saribadyarista*, *Arogyavardhini*, *Gandhak Rasayan*, *Panchatikta Ghrita Guggulu*, *Triphala Guggulu*, *Kaishore Guggulu*, *Chandan*, *Neem*, *Khadir*, *Sariba*, *Ghrita kumari*, *Haridra*, *Strikutaja*, *Bakuchi* etc. are found very useful in the management of skin

diseases. Externally *Tuvaraka Taila*, *Mahamarichyadi Taila*, *Satadhauta Ghrita*, *Suddha Gandhak* with *Coconut Oil*, *Kumkumadi Taila*, *Somraji Taila*, *Nimba Taila*, *Yasad Bhasma* etc. are also found effective in the management of certain skin diseases.

Virechana is the best measure for Kushta (dermatological disorders)

Most of the *Kushta* come under the heading of *Raktapradoshajavyadhi*. *Pitta* is the *mala* of *Rakta*. So, there is *avinabhava sambandha* between *Rakta* and *Pitta*.

When an excessive amount of *pitta* is expelled out from the body it helps to purify the *Rakta* also, and cures the *Raktapradoshajavikaras* like *Kushta*. *Virechana karma* has got specific action on *sapta-dravyas* (*Rasa*, *Rakta*, *Lasika*, *Udaka*, *Vata*, *Pitta* & *Kapha*), which are the prime factors in causation of skin disorders. Hence, *Virechana* is the best *Shodhana karma* in *Pitta pradhana kushta* and to prevent re-occurrences. Similarly,

in *Raktadushti* conditions *malaroopa pitta* gets increased in the body, which is located in the liver and gallbladder. To eliminate such *malaroopa pitta*, *Virechana karma* is the only line of treatment.³

Free radicals can interact with almost all the bio-molecules in different ways, altering their natural properties and making them more susceptible to damage. Such oxidative damage affects almost all components of the cellular machinery

such as carbohydrates, lipids, proteins, and nucleic acids. Both the ROS and the end products of their reaction with various biomolecules can cause DNA damage by altering its nitrogenous bases ([Valko et al., 2004, 2006, 2007](#)). Damage to the mitochondrial DNA, instead of nuclear DNA, is usually a more frequent cause of pathophysiology induced due to oxidative damage. ROS can also directly cause single and double strand breaks in the mitochondrial DNA strands, just as in nuclear DNA ([Durham et al., 2006](#)). Close proximity to the sites of ROS generation from the respiratory chain, lack of histone guard, and limited capacity for DNA-damage repair make the mitochondrial DNA 10–100 times more susceptible to oxidative damage as compared to the nuclear DNA ([Ames et al., 1993](#); [Floyd and Hensley, 2002](#)).

Lipid peroxidation, is a free-radical mediated feed-forward chain reaction that apart from disrupting cellular membranes, can inactivate the other cellular components. Peroxidation involves the direct reaction of oxygen and lipid to form radical intermediates and semi-stable peroxides that in turn damage the cellular proteins, enzymes, nucleic acids, and membranes ([Devasagayam et al., 2003](#)). Malondialdehyde (MDA), which is a major end product of lipid peroxidation is frequently used as an index of the overall lipid peroxidation ([Devasagayam et al., 2003](#)). It cross-links proteins with nucleotides, which causes significant cellular damage ([Sivalokanathan et al., 2006](#)). The impact of oxidative damage on carbohydrates is relatively less studied. Free

radicals such as react $\cdot\text{OH}$ with carbohydrates by randomly abstracting a hydrogen atom from one of the carbon atoms, producing a carbon-centered radical. This leads to chain breaks in the carbohydrate molecules ([Halliwell, 1994](#); [Stohs, 1995](#); [Griffiths and Lunec, 1996](#); [Devasagayam et al., 2004](#)). High abundance of proteins and their rapid rates of reaction with radicals and excited-state species, including singlet oxygen, make them the most susceptible biological targets for oxidative damage within the cell ([Gracanin et al., 2009](#)). Protein oxidation occurs as part of normal regulatory processes, as a defense mechanism against oxidative stress, or as deleterious processes when antioxidant defenses are overcome ([Barelli et al., 2008](#)). Although most oxidized proteins that are functionally inactive are rapidly removed, some can gradually accumulate with time and thereby contribute to the damage associated with aging as well as various diseases. Lipofuscin, an aggregate of peroxidized lipids and proteins, is known to accumulate in the lysosomes of aged cells ([Stadtman, 1992](#)) and brain cells of the patients with Alzheimer's disease ([Perry et al., 2002](#)).

Different tissues have different sensitivity to oxidative damage, based on differences in ROS production, antioxidant molecules, enzymes, and the regenerative capacity of the tissue, for example, the neuronal tissue in general is more susceptible to oxidative damage. The high lipid content of the nervous tissue, in the form of myelin, with abundance of unsaturated fatty acids and long chain fatty acids in cell

membranes, coupled with its high aerobic metabolic activity, make it particularly susceptible to oxidative damage (Floyd and Hensley, 2002).

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