

FOOTPRINTS OF COSMETOLOGY IN AYURVEDA VS CONTEMPORARY SCIENCE – A REVIEW

Pramod Matt^{1*}, Noor Fathima², Apoorva J. M³

^{1,3}PG Scholars, ²Assistant Professor,
Department of Dravya Guna, JSSAMC, Mysore, Karnataka, India

Email: pramodmathaayu@gmail.com

ABSTRACT

Beauty is the desire of every individual to give pleasure to the sense. Beauty is not only a source of joy but gives confidence and proud to some extent. Present scenario in context of beauty has been totally changed in every aspect. Our ancestral herbal beauty products like Haridra & Chandana have been replaced by various chemical prone toxic & costly cosmetic products. Ayurveda emphasizes on both external and internal beauty. Ayurveda never isolate the involvement of mental and spiritual well being from the concept of beauty. Ayurveda, the world's ancient science of health care and healing, works on four levels- body, breath, mind and spirit. When these are in perfect harmony, a person radiates with inner and outer beauty and a proper balance among Tridosha, Saptadhatu, Dinacharya, Ratricharya and Ritucharya helps to maintain the skin health and youthfulness. For physical beauty, Dinacharya and for internal beauty Achara Rasayana, Sadvritta and control over Dharaniya vegas has to be implicated in daily routine. Charakacharya explains that by Rasayana a person with dark complexion can have fair Complexion. So, the present article aims to derive the possible ways of Soundarya Prasadana (enhancement of beauty) through Ayurveda.

Keywords: Beauty, Haridra, Internal beauty, Skin health, Rasayana, Soundarya prasadana.

INTRODUCTION

The word cosmetology is derived from the Greek word: “*Kosmetikos*” meaning “skilled in the use of cosmetics”¹. So, Cosmetology is the science of alteration of appearance and modification of beauty.

“Cosmetic” means any article intended to be rubbed, poured, sprinkled or sprayed on, or introduced into, or otherwise applied to the human body or any part thereof for cleansing, beautifying, promoting attractiveness, or altering the appearance and includes any article intended for use as a component of cosmetic².

Beauty and skin care go hand in hand for those who wants to show off their best with confidence. Complexion of skin is important for determining the beauty that depends upon health, age, diet, habits and environmental conditions. The whole world is behind the physical beauty which is judged by the eyes. But to maintain external beauty, internal beauty plays vital role which is gained through Ayurveda.

Drugs which are mainly mentioned and used for cosmetic purpose are³:-

1. Sandal wood (*Santalum album*)

Being considered as a symbol of vitality, it is commonly used as a cosmetic and in skin care. It is suitable for all types of skin. Sandalwood oil being rich in sesquiterpenoid alcohols (80-90%), is mainly used in numerous skin fairness enhancing cosmetics and had shown low acute oral and dermal toxicity in lab animals. Recent studies have indicated that α -santalol, the major constituent of the sandalwood oil, is a potent inhibitor of tyrosinase (IC₅₀ = 171 μ g/mL) as compared to kojic acid and arbutin (IC₅₀ – 149 μ g/ml) showing great potential for use in skin-care.

2. Padmaka (*Prunus cerasoides*)

The use of *Padmaka* as skin care herb is well documented in both Ayurveda (Used in leprosy, leucoderma, and erysipelas) and in biomedicine, even then it is not a popular cosmetic herb. Recently, a new flavanone glycoside Puddumin-B, (naringenin-4-methyl-ether -7-O- β -D-galactoside) has been isolated from *Prunus cerasoides* which exhibited anti melanogenesis activity by suppression of tyrosinase protein making it a suitable candidate for skin whitening.

3. Madhuyaṣṭi (*Glycyrrhiza glabra*)

Liquorice root offers skin depigmenting, lightening, emollient, anti-acne, photo protection, antiaging, antimicrobial and antioxidant properties, all helpful for a healthy skin. Role of *G. glabra* on skin is mainly attributed to its antioxidant activity of phytochemicals namely triterpene, saponins (Glycyrrhizin-salts of glycyrrhizic acid) and flavonoids. Glycyrrhizic acid controls the secretion of melanin in skin and it has the effect of reducing dark pigmentation and making the complexion fairer. Methanolic extract of its rhizome has been reported to be a potent tyrosinase inhibitor in human skin with more than 75% inhibition. The IC₅₀ value was found to be within range when compared to well known skin whitening agent i.e. Kojic acid. Therefore, it is likely to be useful for cosmetic applications.

4. Mañjiṣṭhā (*Rubia cordifolia*)

It holds the reputation of a very good skin care herb as is used to make the complexion even and lighten dark spots. Ayurvedic texts enumerate its qualities to be: *Varṇya*, *rakta prasādana*, *rakta śodhaka* (blood

purifier). Chemically, it contains glucosides known as Manjisthin and Purpurine, along with resins, lime salts and colouring agents. Methanolic extract of this herb has been reported to show 14.80% mean inhibition of tyrosinase activity thereby acting as skin whitening agent.

5. Nāgakesara (*Mesua ferrea*)

Although it is not popular as a skin care herb but the scientific screening of this plant has confirmed its antioxidant, blood purifier effect along with its potential use in cosmetics. Phytochemically, phenyl coumarins, xanthenes, triterpenoids, flavanoids are mainly held responsible for its biological activity. A study has revealed its potent antioxidant activity comparable to that of standard ascorbic acid. In another study solvent extract of chestnut flowers (chestnut tree being the English name of *Nāgakesara*) has shown to exhibit remarkable mushroom tyrosinase inhibitory activity as effectively as arbutin and protection against ultraviolet (UV) rays making it a strong candidate for use in cosmetics.

6. Śārivā (*Hemidesmus indica*)

Commonly known as *Anantamūla* or *Salsa*, it is employed as a blood purifier and for various skin problems. It promotes health and energy and cures diseases caused by vitiated blood. The antioxidant activity of methanolic extract of *H. indicus* root bark has been evaluated in several *in vitro* and *ex vivo* models. Methanolic extract of its root has been reported to show 14.80% mean tyrosinase inhibitory activity when assayed using L-DOPA as the substrate. Another study revealed root extracts of *H. indicus* to contain 2-hydroxy-4-methoxybenzaldehyde as principal fragrant phenolic compound showing inhibitory potential against diphenolase and monophenolase activity of the tyrosinase enzyme thus proving its skin whitening potential.

7. Bhrungaraja⁴ (*Eclipta alba*)

The study was conducted to evaluate the methanol extract of *Eclipta Alba* as a hair growth promoter. In this study the extract was applied topically to assess telogen to anagen transition in pigmented C57/ BL6 mice. The study showed that methanol extract of

Eclipta Alba may have hair growth promoting property

Cosmetics in Present Scenario:

1. **Botox**⁵ (Fig 1): (onabotulinumtoxinA) is an injectable neuro-toxin in Skin tightening, acne, Hyperpigmentation, Wrinkles, Lip alignment, beautifying Nose.

Side effects of Botox include: Allergic reactions, rash, itching, headache, muscle stiffness, difficulty swallowing, shortness of breath, bruising, bleeding, pain.

2. **Derma rollers**⁶ (Fig 2): A derma roller is a handheld roller-device covered in micro needles – needles ranging in length from 0.25 mm to 1.5mm – which is rolled over the skin. This is done in order to create tiny punctures on the skin which triggers skin repair, leading to the creation of new collagen. A bodily protein made up of amino-acids, collagen is the part of the connective tissue that helps in firmness, strength, suppleness, and elasticity in skin.

Side effects: Skin redness, Dry, rough skin, Inflammation, Infection

3. **Lasers**⁷ (Fig 3): It removes skin layer by layer with precision. The new skin cells that form during healing give the skin a tighter, younger looking surface. The procedure can be done alone or with other cosmetic surgeries on the face.

Side Effects:- Redness, swelling and itching. After laser resurfacing, treated skin will be itchy, swollen

and red. Redness - the degree of which is related to the depth of resurfacing done can be intense and might last for several months.

4. **Liposuction**⁸ (Fig 4): It is a cosmetic procedure that removes fat that you can't seem to get rid of through diet and exercise. A plastic or dermatologic surgeon usually does the procedure on your hips, belly, thighs, buttocks, back, arms, or face to improve their shape. Side effects include swelling and bruises below the treated areas. Liposuction also puts the patient at risk for infection and blood clots,- Skin Numbness, Loose Skin and Fat Embolism Syndrome.

5. **Hair transplant**⁹ (Fig 5): It is a surgical technique that removes hair follicles from one part of the body, called the 'donor site', to a bald or balding part of the body known as the 'recipient site'. Hair transplantation differs from skin grafting in that grafts contain almost all of the epidermis and dermis surrounding the hair follicle, and many tiny grafts are transplanted rather than a single strip of skin.

Side effects: Bleeding, Infection, Swelling of the scalp, a crust that forms on the areas of the scalp where hair was removed or implanted, numbness or lack of sensation on the treated areas of the scalp itching, inflammation or infection of the hair follicles (folliculitis), sudden but typically temporary loss of the transplanted hair (called shock loss) and unnatural-looking tufts of hair.



Fig 1



Fig 2



Fig 3



Fig 4



Fig 5

Courtesy:-

Fig 1: <https://www.newbeauty.com/hottopic/blogpost/11457-how-to-know-if-you-need-botox-or-fillers/>

Fig 2: <https://www.dermarollershops.com/blog/how-to-do-away-with-acne-scars-using-dermarollers/>

Fig 3: <https://www.beautyschoolsdirectory.com/blog/skincare-meets-space-age-laser-cosmetology>

Fig 4: <https://en.wikipedia.org/wiki/Liposuction>

Fig 5: <https://www.medgadget.com/2018/04/hair-transplant-market-ultimate-outlook>

Some of the Traditional Cosmetics methods to enhance beauty:-

Role of Dinacharya:

According to Vagbhata, Dinacharya (daily regimen) means the various activities followed by an individual from morning till sleep at night. The important dinacharya to be followed are as follows.

Mukhasodhana¹⁰- Dantadhawana (brushing), Jihwanirlekhana (tongue cleaning), Gandushadharana (gargling), Mukhaprakshalana and yoga helps to maintain the facial structures healthy.

Abhyanga¹¹- means massage increases blood circulations, open body pores, removes toxins and keeps the skin healthy. Shiro abhyanga, pada abhyanga and shareera abhyanga are types of abhyanga. Shiro abhyanga prevents hairfall and early graying of the hairs. Pada abhyanga not only nourishes the pada but also nourishes the eyes through Gandhari and Hastjihwa Nadi.

Udavratana¹²-is highly demanded procedure for lustre of skin. It is done by smooth rubbing of the skin

using varnya dravyas paste which gives fairness and tenderness of the skin like a lotus by removing dark spots and pimples.

Anjana¹³- There is reference of Kajal from ancient scriptures for cosmetic purpose showing the importance of anjana. Use of anjana for both therapeutic and cosmetic purposes is explained in Ayurveda.

Keshaprasadhanam¹⁴- Scalp hair is one of the important parts of individual's beautifulness. Proper ahara vihara and shiroabhyanga keep hair healthy. Shirolepa and shirovasti are also effective for hairs growth and rejuvenation.

Yoga & Dhyana¹⁵- helps to maintain physical and mental beauty of the body if done properly and systematically.

Nasya¹⁶- As we know "Nasahi sirso dwaram." regular use of pratimarsha nasya increases tone of skin and improves its complexion as well as useful for hair care too.

Ahara¹⁷- It plays vital role in maintaining physical and mental health. Nutritious ahara maintains entire skin complexion, regular hair and nail growth. Acharya Charaka has mentioned that more intake of salt causes early greying of hairs, baldness and wrinkling of skin.

Varnya ahara like Hamsa (swan) mamsa and Koorma (turtle) mamsa are explained in Ayurveda which increase texture of skin.

Role of Rasayana and Skin Beauty²¹

Among Ashtanga Ayurveda, Rasayana is the one that prevents ageing of the skin, maintains prabha, varna and the entire body as well as deals with optimum life span. Rasayana strives and contributes to maintain the

balance between the Doshas and the Dhatus. Rasayana, skin and hair have an innate relation. Rasayanas revitalize the Rasa dhatu and provide natural skin beauty. Some important rasayana Yogas include Chayavanprasa, Narsimha Rasayana, Amritaprasa and Brahma Rasayana.

Sadavrita and Dharniya Vegadharana²²

These are related to psychosomatic properties of the body and mind. Various emotional factors trigger work pressure, anxiety, depression, stress and unbalanced relationship which in turn affects the entire body physiology which leads to altered complexion with unnatural glow and early wrinkling of skin as well as early greying of hairs. Similarly dharaniya vegas such as kama, krodha, lobha, moha, irshya, dwesha, ahankara etc also develop the same. To overcome this mind body relaxation like yogas, meditation, pranayama, achara rasayana, sadvrita and dharniya Vegas are beautifully explained in Ayurveda.

DISCUSSION

Everything in this world has some pros and cons, so as the products which serve numerous benefits to our skin have. It is true that beauty products are helpful in attaining beauty and charm, but it is also correct that there are many side effects that may result with the regular use of these things. Skin infection is one of the biggest skin issues where a person has to suffer from irritation and allergies which is really very irritating and painful. This infection may be caused naturally due to hormonal imbalance, but mainly it occurs when the chemicals in the cosmetics and makeup do not suit the skin and affects them badly by damaging the cells of the skin.

Many have a misconception that makeup and cosmetics are applied on the upper layer of skin and if any side effect is caused then only the top layer of the skin is affected. But, you should not forget that there are uncountable pores present on the skin, which helps the skin to respire and excrete waste from the body in the form of sweat. The chemicals present in these products seeps into the bloodstream from these pores and attacks the internal organs slowly but it can be deadly because it may completely damage the organ.

The makeup products like lipsticks, kajal and eye-shadows have contents, including lead which are, carcinogenic and neurotoxic that can affect the nervous system so badly that it may cause high blood pressure and other behavioral abnormalities.

The chemicals of these products are so harmful that it may cause severe skin diseases like cancer. Mercury and parabens is a chemical used as preservatives in many beauty brands, but these chemicals may cause cancer. Parabens are added to the products to inhibit bacteria, but actually, this chemical triggers the growth of cancer cells in the body²³.

Herbal cosmetics or natural cosmetics are considered best for the skin and hair care. These products have gained the popularity mainly because of their lack of side effects. Herbal cosmetics are very effective for enhancing the health of skin and hair.

Herbal cosmetics are natural and free from all the harmful synthetic chemicals which otherwise may prove to be toxic to the skin e.g. aloe-vera gel and coconut oil. They also consist of natural nutrients like Vitamin E that keeps skin healthy, glowing and beautiful. Example - BHA (Butylated Hydroxyanisole) and BHT (Butylated Hydroxytoluene) are closely related synthetic antioxidants and are used as preservatives in lipsticks and moisturizers. BHA and BHT can induce allergic reactions in the skin.

The synthetic beauty products can irritate your skin, and cause pimples. They might block your pores and make your skin dry or oily. With natural cosmetics, one need not worry about these. The natural ingredients used assure no side effects; one can apply them anytime, anywhere. For example herbal cosmetics are free from parabens, that are the most widely used preservative in cosmetics and can penetrate the skin²⁴.

CONCLUSION

Herbal cosmetics are prepared, using permissible cosmetic ingredients to form the base in which one or more herbal ingredients are used to treat different skin ailments and for the beautification. The chemical formulation of all these cosmetic products includes addition of various natural additives like waxes, oils natu-

ral color, natural fragrances and parts of plants like leaves, etc.

They feel incomplete without carrying these bits and bobs of makeup; the reason behind this is the thought that they look ugly without carrying these makeup components. It has been found in researchers that most of the people use at least ten products in a day. But it should also be kept in mind that chase of attaining beauty has been a never ending race, so it will be better to use these products wisely with care.

The demand of herbal cosmetic is rapidly expanding. The advantages of herbal cosmetics are side effects free, environmental friendly, safe to use etc. Also has a great future ahead as compared to the synthetic cosmetics. Proper regulation of these herbs and standardization will lead to tremendous and significant growth in herbal cosmetics field.

REFERENCES

1. <https://en.wikipedia.org/wiki/Cosmetology>
2. <https://www.fda.gov/Cosmetics/GuidanceRegulation/LawsRegulations/ucm074201.htm>
3. Khemchand Sharma, Namrata Joshi, and Chinky Goyal. Critical review of Ayurvedic *Varnya* herbs and their tyrosinase inhibition effect. 2015 Jul-Sep; 35(1): 18–25.
4. Keshya drugs in Bhava Prakasha Nighantu: A Review Review Article. Dhiraj Kumar Vishwakarma, Sonal Bhola. International Journal of Ayurvedic Medicine, 2015, 6(4), 289-293
5. <https://www.drugs.com/botox.html>
6. <https://www.beautyglimpse.com/derma-roller-treatment-benefits-side-effects/>
7. <https://www.webmd.com/beauty/laser-skin-resurfacing#1>
8. <https://www.india.com/lifestyle/what-is-liposuction-what-are-its-side-effects-2499061/>
9. <https://www.healthline.com/health/hair-transplant>
10. Bhuvanewaram Mohan. Principles of Smile, Design, J. Conserve Dent, 2010; 13(4): 225-232.doi:10.4103/0972-0707.73387.
11. BV Rekha et al. Role of Padabhyanga in Sisira Ritu, w.s.r. to Padasphutana, Punarnav, 2015; 2(6): 1-7.
12. Bhojarajakrta Charyacharya, Kendriya Ayurveda, Evam Sidha Anusandhan Parishad, Edition, 2: 21.
13. Shilpa et al. Cosmetology in Ayurveda, International, Ayurvedic Medical Journal, 2014; 2(2): 138-141.
14. Manning, Jodi The Sociology of Hair: Hair symbolism among college students, SocialSciences Journal, 2010; 10(1): 35-48. <http://repository.wcsu.edu/ssj/vol110/1ss1/11>.
15. <https://www.lexiyoga.com/yoga-for-beauty>
16. Sahoo Prasanta Kumar et al. Concept of Preventive Ophthalmology in Ayurveda. Int. J. Res. Ayurveda Pharm, 2016, 7(Suppl 2): 115-119.<http://dx.doi.org/10.7897/2277-4343.07269>.
17. Agnivesha. Sareera Sthana. Vaidya Jadavji Tikramji, Acharya with Ayurveda Deepika Commentary of Chakrapani dutta, Charak Samhita. Reprint Ed. Varansi: Chaukhamba Prakashan, 2008; 7(15): 339
18. Agnivesha. Sutra Sthana. Vaidya Jadavji Tikramji, Acharya with Ayurveda Deepika Commentary of Chakrapani dutta, Charak Samhita. Reprint Ed. Varansi: Chaukhamba Prakashan, 2008; 27(65):158.
19. Agnivesha. Sutra Sthana. Vaidya Jadavji Tikramji Acharya with Ayurveda Deepika Commentary of Chakrapani dutta, Charak Samhita. Reprint Ed. Varansi: Chaukhamba Prakashan, 2008; 27(86):158.
20. S. Williams et al. International Journal of Cosmetic Science, 2007; 29(2): 131-23.
21. Agnivesha. Chikitsa Sthan. Ayurveda Deepika ,Commentary of Chakrapani dutta, Charak Samhita, Reprint Ed. Varansi: Chaukhamba Prakashan, 2009;7(8): 3.
22. Agnivesha. Sutra Sthan. Vaidya Jadavji Tikramji Acharya with Ayurveda Deepika Commentary of Chakrapani dutta, Charak Samhita. Reprint Ed. Varansi: Chaukhamba Surbharati Prakashan, 2007; 8(17): 58.
23. <http://www.lifestimestyles.com/makeup-products/top-5-disadvantages-of-using-cosmetics-and-beauty-products>
24. Laxmi S Joshi and Harshal A Pawar. Herbal Cosmetics and Cosmeceuticals: An Overview. Natural Products Chemistry & Research. February 16, 2015.

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