

A Review on Cosmatovigilance

Surbhi Choursiya and Anjali Rathore

Ujjain Institute of Pharmaceutical Sciences, Ujjain, MP, India
drx.surbhichoursiya@gmail.com and anjalipawanchouhan@gmail.com

Abstract: Cosmetic formulation is becoming increasingly complex given the challenges of formulating for a technologically sophisticated consumer. This text is designed to meet the needs of the cosmetic chemist, scientist, dermatologist and formulator who must understand a wide range of issues to create successful, novel skin care products for a diverse population. The skin is the largest organ of the body, and in addition to chemicals, it is exposed to physical and biological risk factors. However, there is no scientific method of measuring the results of the body's exposure to risks through dermal contact. . Cosmetic formulation is becoming increasingly complex given the challenges of formulating for a technologically sophisticated consumer, Cosmetics are referred by their intended use, as "articles intended to be rubbed, poured, sprinkled, or sprayed on, introduced into, or otherwise applied to the human body...for cleansing, beautifying, promoting attractiveness, or altering the appearance" "Cosmetovigilance" is a term related to the collection, evaluation, and monitoring of spontaneous reports of undesirable events observed during or after normal or reasonably foreseeable use of a cosmetic product. It is a Public health surveillance carried out by industry to address the safety of cosmetic products. It is recognized globally as a concept of public health to address the safety of cosmetic products. To detect adverse effects of Cosmetic products, and to prevent Adverse effects by taking appropriate measures in tertiary care hospital. Materials and methods. A Cosmeto vigilance systems are genuine means of obtaining information on the safety of cosmetic products and their ingredients. They can be used by Europe to check that new directives ensure a high level of safety. Cosmeto vigilance makes it possible to rule out or control potentially hazardous ingredients and can thus set our minds at ease about the products placed on the market..

Keywords: Cosmetic Adverse Effects, Cosmetovigilance, Cosmetics, Skin Condition, Skin Disease

I. COSMETICS

The word cosmetics were first used to describe Roman slaves whose function was to bathe men and women in perfume. In Egypt, as early as 10,000 BC, men and women used scented oils and ointments to clean and soften their skin and mask body odor. Dyes and paints were used to color the skin, body and hair. They rouged their lips and cheeks, stained their nails with henna and lined their eyes and eyebrows heavily with kohl. Kohl was a dark-colored powder made of crushed antimony; burnt almonds lead oxidized copper, ochre, ash, malachite, chrysocolla (a bluegreen copper) or any combination thereof. Cosmetic is a Greek word which means to 'adorn'. It may be defined as a substance which comes in contact with various parts of the human body like skin, hair, nail, lips, teeth, and mucous membranes etc. Cosmetic substances help in improving or changing the outward show of the body and also mask the odour of the body. It protects the skin and keeps it in good condition. In general, cosmetics are external preparations which are applied on the external parts the body.

Cosmetics Act, 1940 is an Act of the Parliament of India which regulates the import, manufacture and distribution of drugs in India. The drugs and cosmetics sold in India are safe, effective and conform to state quality standards. The related Drugs and Cosmetics Rules, 1945 contains provisions for classification of drugs under given schedules and there are guidelines for the storage, sale, display and prescription of each schedule. The act defines "cosmetic" as any product that is meant to be applied to the human body for the purpose of beautifying or cleansing. The definition however excludes soaps. In 1964 the act includes Ayurvedic and unani drugs. Cosmetics are defined as an article intended to be applied to the human body for cleansing, beautifying, promoting attractiveness, or altering the appearance without affecting the body's structure or function. Cosmetics are asserted not to have any therapeutic effects.

II. COSMETOVIGILANCE

It was first used in the French literature in 1997, the term “cosmetovigilance” was not indexed on an international scale; the concept could be translated by “surveillance” or “monitoring cosmetic product safety”. Before addressing this fairly recent subject, it seems necessary to specify what surveillance is and what cosmetics are. Cosmetovigilance is a form of health surveillance. It thus differs from the surveillance carried out by the industry, whose aim is the safety of the product for commercial purposes, and differs from peer surveillance. **Cosmetovigilance** refers to the post marketing surveillance of any health related undesirable effects possibly due to the use of cosmetic products. The purpose of Cosmetovigilance is to collect, analyze and assess the adverse reactions occurring in consumers to identify any potential health risks, thus guaranteeing a further strengthened safety for consumers. The regulations for cosmetic products primarily address the safety of products that may be used by large populations of healthy consumers. However, the efficacy and safety of cosmetic products are not reviewed or approved by national authorities before they are sold to the public.

2.1 Need of Cosmetovigilance in India

The Indian cosmetic industry is mature and growing in terms of product development and marketing because consumer’s preferences are changing from merely cosmetic to more functional, advanced and specialized products. India is fourth largest cosmetic market in the Asia pacific region after Japan, China and South Korea. The unwanted or adverse reactions due to cosmetic products are very low or go unnoticed due to lack of proper organized reporting system. In India as far as drugs are concern there is post –marketing vigilance system usually focus on adverse reactions of drugs, recently much consideration is given to medical devices, blood products, biologics, special nutritional and natural products, whereas less attention has been addressed to adverse reactions related to cosmetic products. In general, the surveillance of cosmetic products which are placed in the market is called as Cosmetovigilance. Post-marketing vigilance system for cosmetics is different from country to country. In United States a consumer can report a cosmetic related problem to FDA. The consumers reported information help FDA to monitor the safety of cosmetics on the market. In Mercosur (Argentina, Brazil, Paraguay, Uruguay, and Venezuela) cosmetic companies/importer are requested to evaluate and to keep cosmetovigilance report. In Europe cosmetovigilance system is developing at fast pace. Few countries have formal post marketing cosmetovigilance system and some have informal one. Germany and Sweden are the two countries that have a formal cosmetovigilance system. In formal cosmetovigilance systems the regulatory authorities is responsible for the collection of adverse reactions to cosmetics (ACRs) by different professional categories like medical practitioners, general practitioners and public health services. Based on Germany and Sweden cosmetovigilance system, India can initiate to have formal cosmetovigilance system. In future it could contribute to increased safety of cosmetics use which is important for the safeguard of public health.

Examples of Cosmetics

Skin-care creams, powder, lotions, nail polishes, eye and face makeup, deodorants, baby products, hair colorants, and sprays, toothpaste, perfumes, antiperspirants, hairsprays, facial makeup, shampoo, save lotion, conditioner etc.

2.2 Advantages of Cosmetics

- Natural cosmetics are the latest craze in the field of beauty and fashion.
- These break throughs are gaining more and more popularity as women seek organic or more natural ingredients in their makeup.
- Women are always on the lookout for better products and natural cosmetics happened to be one of them.
- People always say that natural is better, even when it comes to make up. No wonder, more and more women are turning to natural cosmetics for their beauty essentials. Even top manufacturers are using natural ingredients to keep up with the demand for more natural cosmetics in the market today.
- Instead plant and flower extracts are used. They also contain natural nutrients like **Vitamin E** that keeps skin healthy and glowing.
- Compared with other beauty products, natural cosmetics are safer to use. They are **hypo-allergenic** and tested and proven by dermatologists to be safe to use anytime, anywhere. Since they are made of natural ingredients, you don’t have to worry about getting rashes or experience skin itchiness.

- Natural cosmetics are perfect for all skin types. Whether you are dark or fair, you will find natural cosmetics like **foundation, eye shadow, and lipstick** which are appropriate for your skin tone. Women with oily or sensitive skin can also use them and never have to worry about worsening their skin condition.
- Natural cosmetics may still be a new face in the beauty industry but they already offer a wide selection of beauty products for all make up fanatics out there to choose from.
- Woman are always on the lookout for better product and natural cosmetics happy being one of them, they are easily incorporated with skin and hair.

2.3 Disadvantages of Cosmetics

- It can make you look more attractive but, it can irritate or bother your skin /eyes etc.
- It can hide blemishes but it can also cause them.
- Makeup is designed to enhance your appearance.
- It becomes a problem when someone must rely on makeup to believe their appearance is beautiful.

2.4 Applications and Uses of Cosmetics

- Cosmetics have been in use since ages for improving the appearance of the person wearing them.
- Beauty cosmetics can make a drastic change in a person's features, as they enhance the best features and cover the blemishes. People use lotions and creams to cleanse the skin deeply.
- This is not possible with regular soap and water. Deep cleansing opens the skin pores and removes other underlying pollutants. Blocked pores lead to the formation of acne and beauty cosmetics prevent this from happening.
- People use makeup, because it gives them a better appearance than natural. This increases their confidence and allows them to carry themselves confidently.
- Cosmetics creams or emulsions are the most popular form of beauty care products. These are moisturizers and nourishing agents, sunscreens, makeup foundations and primers, and a lot more. No matter what the effect of a cream or an emulsion must be, they consist of three components or phases: oil, water, and emulsion.
- It is used to provide rigidity to the stick.
- It is used in modest proportion in order to ensure high melting points.
- It helps in moulding by shrinking the stick away from the surface of the mould in order to aid easy removal.

III. CLASSIFICATIONS OF COSMETICS

Cosmetics are broadly categorized into four types:

- Skin Cosmetics
- Hair Cosmetics
- Nail Cosmetics
- Cosmetics for hygiene purpose

3.1 Skin Cosmetics

A combination of therapy' and procedures is almost always necessary to obtain a satisfactory result. There are some intrinsic factors that can be aggravated or accelerated by extrinsic factors including improper or inadequate skin care, excessive sunlight exposure including artificial tanning and smoking among other factors. There are some of common conditions of skin problem that often occur in cosmetic dermatology field such as acne, rosacea, wrinkles, traumatic scars, age spots, melasma, textural problems including dry spots, sun damage, rough and dry skin, and facial redness.

3.2 Structure and Function of the Skin

The human skin is the outer covering of the body and is the largest organ of the integumentary system. The skin has up to seven layers of ectodermal tissue and guards the underlying muscles, bones, ligaments and internal organs. Human skin is similar to most of the other mammal's skin, and it is very similar to pig skin. Though nearly all human skin is covered with hair follicles, it can appear hairless. There are two general types of skin, hairy and glabrous skin (hairless). The

adjective cutaneous literally means "of the skin". Skin is the largest organ in the body. It covers the body's entire external surface, serving as a first-order barrier against pathogens, UV light, and chemicals, and provides a mechanical barrier to injury. It also regulates temperature and amount of water released into the environment. Because it interfaces with the environment, skin plays an important immunity role in protecting the body against pathogens and excessive water loss. Its other functions are insulation, temperature regulation, sensation, synthesis of vitamin D, and the protection of vitamin B folates. Severely damaged skin will try to heal by forming scar tissue.

Structure of Skin

Three layers of skin

- Epidermis
- Dermis
- Subcutaneous tissue(hypodermis)

Epidermis

The epidermis, the outermost layer of skin, provide a waterproof barrier and create our skin tone.

Layers of Epidermis

- Stratum basale aka stratum germinativum – deepest layer, separated from dermis by basement membrane (basal lamina) and attached by hemidesmosomes.
- Stratum spinosum aka prickle cell layer - irregular, polyhedral cells with processes (“spines”) that extend outward and contact neighboring cells by desmosomes.
- Stratum granulosum - diamond shaped cells which contain keratohyalin granules; aggregates keratin filaments present in cornified cells.
- Stratum lucidum - if present, thin clear layer consisting of eleidin (transformation product of keratohyalin); usually seen in thick skin only.
- Stratum corneum - outermost layer, made up of keratin and horny scales which were once living cells; dead cells known as squamous (anucleate); layer which varies most in thickness, especially thick in callused skin. Cells of the Epidermis

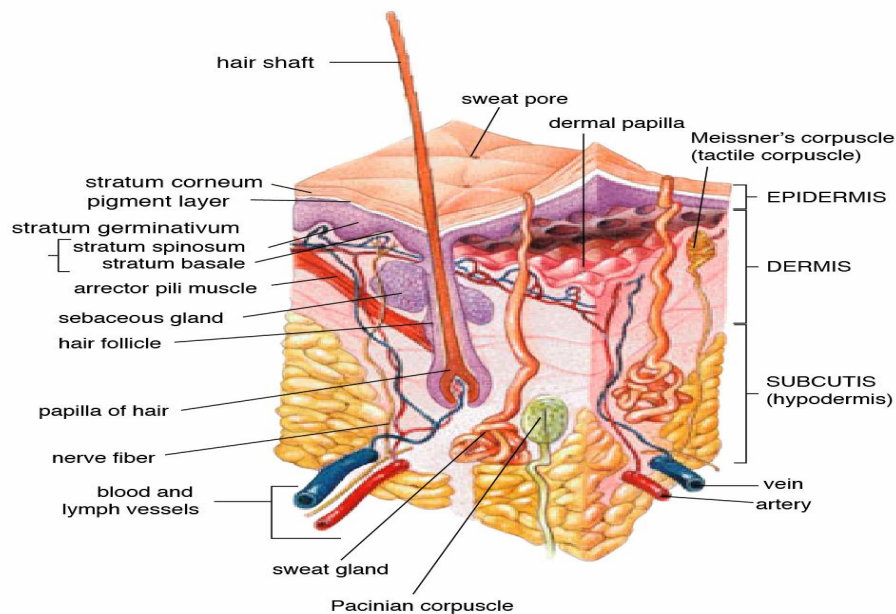


Figure: Structure of Skin

Dermis: It consists of two layers of connective tissue which merge together, no clear demarcation.

- Papillary layer - Outer layer, thinner, composed of loose connective tissue and contacts epidermis.
- Reticular layer - Deeper layer, thicker, less cellular, and consists of dense connective tissue/ bundles of collagen fibers. The dermis houses the skin appendages (sweat glands and hairs), many sensory neurons, and blood vessels.

Hypodermis:

Deepest layer of skin and Contains adipose lobules along with some skin appendages (hair follicles), sensory neurons, and blood vessels.

Function of Skin

The skin has multiple functions including

- Barrier: water, bacterial, mechanical, UV light.
- Immunological.
- Homeostasis: temperature regulation and water loss
- Sensory: touch
- Endocrine
- Exocrine: secretion of sweat, sebum, etc.

Skin Conditions

- Rash: Nearly any change in the skin's appearance can be called a rash. Most rashes are from simple skin irritation; others result from medical conditions.
- Dermatitis: A general term for inflammation of the skin. Atopic dermatitis (a type of eczema) is the most common form.
- Eczema: Skin inflammation (dermatitis) causing an itchy rash. Most often, it's due to an overactive immune system.
- Psoriasis: An autoimmune condition that can cause a variety of skin rashes. Silver, scaly plaques on the skin are the most common form.
- Dandruff: A scaly condition of the scalp may be caused by seborrheic dermatitis, psoriasis, or eczema.
- Acne: The most common skin condition, acne affects over 85% of people at some time in life.
- Cellulites: Inflammation of the dermis and subcutaneous tissues, usually due to an infection. A red, warm, often painful skin rash generally results.
- Skin abscess (boil or furuncle): A localized skin infection creates a collection of pus under the skin. Some abscesses must be opened and drained by a doctor in order to be cured.
- Rosacea: A chronic skin condition causing a red rash on the face. Rosacea may look like acne, and is poorly understood.
- Warts: A virus infects the skin and causes the skin to grow excessively, creating a wart. Warts may be treated at home with chemicals, duct tape, or freezing, or removed by a physician.
- Melanoma: The most dangerous type of skin cancer, melanoma results from sun damage and other causes. A skin biopsy can identify melanoma.
- Basal cell carcinoma: The most common type of skin cancer. Basal cell carcinoma is less dangerous than melanoma because it grows and spreads more slowly.
- Seborrhea keratoses: A benign, often itchy growth that appears like a "stuck-on" wart. Seborrhea keratoses may be removed by a physician, if bothersome.
- Actinic keratosis: A crusty or scaly bump that forms on sun-exposed skin. Actinic keratoses can sometimes progress to cancer.
- Squamous cell carcinoma: A common form of skin cancer, squamous cell carcinoma may begin as an ulcer that won't heal, or an abnormal growth. It usually develops in sun-exposed areas.
- Herpes: The herpes viruses HSV-1 and HSV-2 can cause periodic blisters or skin irritation around the lips or the genitals.
- Hives: Raised, red, itchy patches on the skin that arise suddenly. Hives usually result from an allergic reaction.
- Tinea versicolor: A benign fungal skin infection creates pale areas of low pigmentation on the skin.

- Viral exantham: Many viral infections can cause a red rash affecting large areas of the skin. This is especially common in children.
- Shingles (herpes zoster): Caused by the chickenpox virus, shingles is a painful rash on one side of the body. A new adult vaccine can prevent shingles in most people.
- Scabies: Tiny mites that burrow into the skin cause scabies. An intensely itchy rash in the webs of fingers, wrists, elbows, and buttocks is typical of scabies.
- Ringworm: A fungal skin infection .The characteristic rings it creates are not due to worms.

Skin Disease

Scabies

It is a common ectoparasitic infestation caused by *Sarcoptes scabiei*, a human-specific mite that is highly prevalent in some areas of the developing world. Scabies is transmitted by direct contact. In industrial societies, it is usually seen in sexually active adults, although it may also appear in the form of clusters of cases among the elderly in residential homes. Peaks of infection in communities may be cyclical. The ease of transmission appears to depend, in part, on the parasitic load, and some patients, including the elderly, may have large numbers of parasites present. By contrast, in healthy adults, the total parasite load may be low, but they, nonetheless, may suffer from highly itchy lesions. The organisms can also reach high densities in patients suffering from a severe depression of immunological responses, as in HIV infection. In this crusted or Norwegian form of scabies, lesions may present with atypical crusted lesions that itch little. In developing countries, transmission commonly occurs in young children and infants and their mothers and is related to close contact, overcrowding, and shared sleeping areas. Sexual contact is less important as a means of transmission. Scabies is also a scourge of prisons in developing countries, where it is associated with overcrowding. No evidence exists that transfer is related to inadequate hygiene. The most important complication of scabies is secondary bacterial infection, usually caused by Group a streptococci.

Symptoms of Scabies

Signs and symptoms of scabies include:

- **Itching:** This is often worse at night and can be severe and intense. Itching is one of the most common scabies symptoms.
- **Rash:** When the mite burrows into the skin, it forms burrow tracks, or lines, which are most commonly found in skin folds, and resemble hives, bites, knots, pimples or patches of scaly skin. Blisters may also be present.
- **Sores:** These occur in infested areas where a person has scratched at the skin. Open sores can lead to impetigo, commonly caused by secondary infection with *Staphylococcus aureus*.
- **Thick crusts:** Crusted scabies, also known as Norwegian scabies, is a form of severe scabies in which hundreds to thousands of mites and mite eggs are harbored within skin crusts, causing severe skin symptoms.

Treatment for Scabies

The treatments used for scabies are mainly applied topically. Treatment is not based on treating just affected individuals, both because of the ease with which scabies spreads and because symptoms may develop days or weeks after infection.

- **Sulfur ointments.** There are no controlled clinical studies of the use of this cheap medication, which is usually made up in an ointment base. Soap containing sulfur is available in some areas. Anecdotally, sulfur ointment needs to be applied for at least one week to the entire body. Irritation is a common side effect, and lower concentrations, such as 2.5 percent, are applied to infants.
- **Benzyl benzoate.** A 10 to 25 percent benzyl benzoate emulsion is applied over the entire body and left on the skin for up to 24 hours before washing off. Current recommendations suggest that one to three applications may be sufficient, but consensus on the optimal treatment regimen would be useful. Benzyl benzoate emulsion is an irritant and can lead to secondary eczema in some patients.
- **Gamma benzene hexachloride (Lindane).** This product is widely available and is used as a single application washed off after 12 to 24 hours. Concerns have arisen about the increasing risk of drug resistance and the absorption

of the drug through the skin. It is also not used in children because of reports of neurotoxicity and fits. This product is not available in many countries.

- **Malathion (0.5 percent) in an aqueous base.** The highly purified commercial forms are effective after a single application, although a second is advised. No data are available on the use of this preparation in developing countries.
- **Crotamiton cream or monosulfiram 25 percent.** These alternative therapies have highly variable efficacy rates.



Figure 2: Scabies

Bacterial Infections or Pyoderma

Bacterial skin infections or pyoderma are common in most developing countries. The usual bacterial causes are Group A streptococci or *Staphylococcus aureus*. Bacterial infections are common in communities. In many cases, no bacteriological confirmation is available from cultures, but surveys show that Group A streptococci account for a substantial number of cases which is not often the case in similar infections in temperate climates, where *S. aureus* dominates. Bacterial infection causes irritation and some discomfort. In some cases, the infection penetrates deep down through the epidermis, causing a necrotic ulcer—a condition known as ecthyma. However, some evidence suggests that streptococcal infection may cause additional long-term damage through the development of prolonged proteinuria, as described earlier in relation to scabies.

Symptoms of Pyoderma

Pyoderma gangrenosum usually starts with a small, red bump on your skin, which may resemble a spider bite. Within days, this bump can develop into a large, painful open sore. The ulcer usually appears on your legs, but may develop anywhere on your body. Sometimes it appears around surgical sites. If you have several ulcers, they may grow and merge into one larger ulcer.

Treatment for Bacterial or Pyoderma

Treatment with topical antibacterials, such as fusidic acid or mupirocin, is expensive; thus, the use of cheaper agents, such as antiseptics, is an important option but one that has been evaluated in only a few instances. Chlorhexidine and povidone iodine have both been used, but potassium permanganate is also said to be clinically effective. Gentian violet at concentrations of 0.5 to 1.0 percent is a cheap agent that is widely used, with proven in vitro efficacy against agents commonly involved in pyoderma. Most of those compounds have been used to prevent rather than to treat infections. The most extensively evaluated topical preparations are fusidic acid ointment and mupirocin, which are given daily for up to 10 days. Group A streptococci are still sensitive to penicillin, which can be used for treatment, with alternatives for staphylococcal infections being cloxacillin, flucloxacillin, and erythromycin. Industrial countries largely view methicillin resistance among staphylococci as a nosocomial problem, yet it has now spread to the community, and skin infections provide an ideal medium for the spread of resistance, even in developing countries.

Fungal Infections

Fungal infections that affect the skin and adjacent structures are common in all environments. They include infections such as ringworm or dermatophytosis; superficial candidosis and infections caused by lipophilic yeasts and *Malassezia*

species; and some other common causes of foot infection, such as *Scytalidium*. The clinical and social impact of fungal infections on individuals varies with local conditions. For instance, tinea pedis is a treatable condition that causes cracking and inflammation with itching between the toes. It is generally viewed as a nuisance that only marginally affects the quality of life; however, under certain conditions its significance is far greater. For example, fungal infections of the web spaces and toenails in diabetics provide a portal of entry for *S. aureus*, an event closely related to the development of serious foot complications in patients with peripheral vascular disease and neuropathy. Other infections, such as oropharyngeal candidosis, are important complications of HIV. This commonest infectious complication of AIDS is a potential early marker. Whereas in many patients it may simply have nuisance value, in others it has a more serious impact and leads to dysphagia and loss of appetite.

Symptoms of Fungal Infections

- Redness in the groin, buttocks, or thighs.
- Chafing, irritation, itching, or burning in the infected area.
- a red rash with a circular shape and raised edges.
- Cracking, flaking, or dry peeling of the skin in the infected area.
- Irritation.
- Scaly skin.
- Swelling.

Treatment for Fungal Infections

It can use over-the-counter antifungal sprays and creams to treat a **fungal skin infection**. If your condition doesn't improve, ask your doctor about prescription oral or topical creams. In addition, you can apply medicated creams to your skin to **treat parasitic skin infections**.

Acne

Acne can affect people with any skin type – at any age. This condition occurs when hair follicles become clogged with oil and dead skin cells, and can range from mild acne with just a few red spots to more severe acne with hundreds of painful, solid red lumps covering the face, neck, chest, back, and shoulders. Acne is a skin condition that occurs when your hair follicles become plugged with oil and dead skin cells. It often causes whiteheads, blackheads or pimples, and usually appears on the face, forehead, chest, upper back and shoulders. Acne is most common among teenagers, though it affects people of all ages. Effective treatments are available, but acne can be persistent. The pimples and bumps heal slowly, and when one begins to go away, others seem to crop up. Depending on its severity, acne can cause emotional distress and scar the skin. The earlier you start treatment, the lower your risk of such problems.

Symptoms of Acne

Acne signs and symptoms vary depending on the severity of your condition:-

- Whiteheads (closed plugged pores).
- Blackheads (open plugged pores)
- Small red, tender bumps (papules).
- Pimples (pustules), which are papules with pus at their tips.

Large, solid, painful lumps beneath the surface of the skin (nodules). Painful, pus-filled lumps beneath the surface of the skin (cystic lesions).

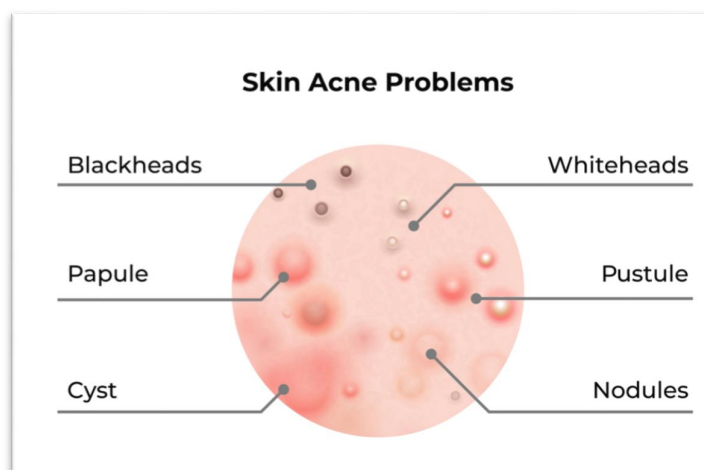


Figure 3: Acne

Treatment for Acne

At dermatology Specialists, we offer a comprehensive range of treatment options to help our patients get their acne under control. Our mild acne treatments include oral antibiotics and topical creams, gels, and ointments with benzoyl peroxide or salicylic acid. For treating more severe acne, we offer mild acidic cleansers, chemical peels, microdermabrasion, light therapy, and stronger antibiotics. In addition to being painful and embarrassing, acne can also cause scarring of the skin. Whether your scars are new or decades old, we can help diminish their appearance and improve your skin tone with procedures such as laser resurfacing, light therapy, dermabrasion, micro dermabrasion, and soft fillers.

Skin Cancer

The abnormal growth of skin cells most often develops on skin exposed to the sun. But this common form of cancer can also occur on areas of your skin not ordinarily exposed to sunlight. PAHs, in association with exposure to the sun can cause various cancers of the skin among bricklayers and tilers: these include malignant epithelioma, carcinomas and even the much-feared malignant melanoma ('Carcinogenic or mutagenic agents'). According to the latest statistics, in 2006 in the United Kingdom 21 % of all reported skin diseases were cancers. It is estimated, that approximately 11 % of deaths caused by skin cancers melanoma and non-melanoma.

Symptoms of Skin Cancer

Skin cancer develops primarily on areas of sun-exposed skin, including the scalp, face, lips, ears, neck, chest, arms and hands, and on the legs in women. But it can also form on areas that rarely see the light of day — your palms, beneath your fingernails or toenails, and your genital area. Skin cancer affects people of all skin tones, including those with darker complexions. When melanoma occurs in people with dark skin tones, it's more likely to occur in areas not normally exposed to the sun, such as the palms of the hands and soles of the feet.

Treatment for Skin Cancer

If additional treatment is needed, options may include:

- **Freezing.** Your doctor may destroy actinic keratoses and some small, early skin cancers by freezing them with liquid nitrogen (cryosurgery). The dead tissue sloughs off when it thaws.
- **Excisional surgery.** This type of treatment may be appropriate for any type of skin cancer. Your doctor cuts out (excises) the cancerous tissue and a surrounding margin of healthy skin. A wide excision — removing extra normal skin around the tumor — may be recommended in some cases.

- **Mohs surgery.** This procedure is for larger, recurring or difficult-to-treat skin cancers, which may include both basal and squamous cell carcinomas. It's often used in areas where it's necessary to conserve as much skin as possible, such as on the nose.
- **Radiation therapy.** Radiation therapy uses high-powered energy beams, such as X-rays, to kill cancer cells. Radiation therapy may be an option when cancer can't be completely removed during surgery.
- **Chemotherapy.** In chemotherapy, drugs are used to kill cancer cells. For cancers limited to the top layer of skin, creams or lotions containing anti-cancer agents may be applied directly to the skin. Systemic chemotherapy can be used to treat skin cancers that have spread to other parts of the body.

Rosacea

Rosacea is a chronic skin disease that affects more than 16 million Americans. The cause of rosacea is still unknown, and there is no cure. However, research has allowed doctors to find ways to treat the condition by minimizing its symptoms. There are four subtypes of rosacea. Each subtype has its own set of symptoms. It is possible to have more than one subtype of rosacea at a time. Rosacea's trademark symptom is small, red, pus-filled bumps on the skin that are present during flare-ups. Typically, rosacea affects only skin on your nose, cheeks, and forehead. Flare-ups often occur in cycles. This means that you will experience symptoms for weeks or months at a time, the symptoms will go away, and then return.

Symptom of Rosacea

Rosacea symptoms are different between each subtype.

- Flushing and redness in the center of your face.
- Visible broken blood vessels.
- Swollen skin.
- Sensitive skin.
- Stinging and burning skin.
- Dry, rough, and scaly skin.

Treatment of Rosacea

Treatment for rosacea focuses on controlling signs and symptoms. Most often this requires a combination of good skin care and prescription drugs.

IV. ADVERSE EFFECTS FOR USING HAIR COSMETICS

4.1 Hair Cosmetics

Hair cosmetics are also an important tool for increasing patient's adhesion to scalp treatments, according to the diversity of hair types and ethnicity. True described them as "preparations intended for placing in contact with the hair and scalp, with the purpose of cleansing, promoting attractiveness, altering appearance, and/or protecting them in order to maintain them in good condition" Nowadays, hair care and style play a very important role in people's lives, both for men and women, so knowledge of hair products, mode of action, efficacy, ingredients and hair procedures has become more relevant in dermatologists' medical practice. The amount of money spent to enhance the hair beauty is an indication of how much attention is given today to the hair appearance. On the other hand, these data are emphasized in patients suffering from hair disease.

Hair cosmetics can be distinguished into two main categories: (A) Cosmetics with temporary effect on the hair, for example shampoos, conditioners, sprays, and temporary colors; (B) Cosmetics that produce permanent effect on the hair shaft, such as permanent waves, relaxers, bleaches and permanent colors.

Example of Skin Cosmetics:

Shampoo, Conditioners, Hair straighteners, permanent waves and hair sprays.

V. ADVERSE EFFECTS FOR USING NAIL COSMETICS

5.1 Nail Cosmetics

The nail as an anatomic structure protects the terminal phalanx of the digit from injury. Historically, it has served as a tool for protection and for survival. As civilizations developed, it attained the additional function of adornment. Nail beautification is a big industry today, with various nail cosmetics available, ranging from nail hardeners, polishes, extensions, artificial/sculpted nails, and nail decorations. Adverse events may occur either during the nail-grooming procedure or as a reaction to the individual components of the nail cosmetics. This holds true for both the client and the nail technician. Typically, any of the procedures involves several steps and a series of products. Separate "nail-bars" have been set up dedicated to serve women and men interested in nail beautification. This article attempts to comprehensively inform and educate the dermatologist on the services offered, the products used, and the possible/potential adverse effects related to nail-grooming and nail cosmetics.

Example of Nail Cosmetics

Nailpolish, Vanishpaint, Hypoallergenic Nail Polish, Nail Hardeners, Nail Polish Remover, French Nail Manicure, Nail Adornment, Artificial Nails, etc.

VI. ADVERSE EFFECTS FOR USING HYGIENE PURPOSE

Hygiene is more than just being clean. It is defined as the many practices that help people be and stay healthy. Practicing good personal hygiene is smart for two reasons. First, it helps prevent people from catching and spreading illness and disease. Second, it helps people feel good about themselves and their bodies. In American society, cleanliness is an important issue; poor hygiene is seen as unacceptable and unhealthy. Good hygiene includes thoroughly and regularly washing one's body (especially hands), washing one's hair, brushing and flossing teeth, and caring for gums. These grooming habits will reduce the threat of bacteria that constantly reside on the body. While a certain amount of bacteria are harmless, and even beneficial, to the body, a build-up of bacteria can harm a person's health.

Example of Hygiene

Washing Hands, Controlling Body Odor, deodorants and antiperspirants, perfumes, colognes, and scented soap, Puberty and Acne, Sun Protection, eczema.

REFERENCES

- [1]. Nathan Kavita et.al, "Study and Review of Cosmetovigilance in a Tertiary Care Hospital". IOSR Journal of Dental and Medical Sciences (IOSR-JDMS), 2019; 18(11): P.no. 12-13.
- [2]. Khan A D et.al, "Cosmetics and there associated adverse effects: A Review". Journal of applied pharmaceutical sciences and research; 2019 2(1);(E-ISSN); (2581-5520): p.no. 1-5.
- [3]. Toklu Hale Z et.al, "Cosmetovigilance: A review of the current literature". Journal of Family Medicine and Primary Care, 2019; (8); p. no-1540-1542.
- [4]. Pereira Jonathas Xavier et.al, "Cosmetics and its Health Risks". Global Journal of Medical Research: B Pharma, Drug Discovery, Toxicology & Medicine, 2018; (18)2 :p. no.4-5.
- [5]. Aziz Ramlan et.al, "Application of Essential Oils As Natural Cosmetics Preservatives - A Review." Cosmeceutical and natural cosmetics, 2017;p. no.142-156.
- [6]. Bhatt Kruti et.al, "A study on Consumer Buying Behavior towards Cosmetic Products". International Journal of Engineering Technology Science and Research, 2017; p. no-1244.
- [7]. Trivedi M K et.al, "A review of the safety of cosmetic procedures during pregnancy and lactation". Int J Womens Dermatol, 2017; p. no.6-10.
- [8]. Senith S. et.al, "A study on Factors Influencing Consumer Buying Behaviour in Cosmetic Products". International journal of Scientific and Research Publication, 2017;(4): p. no-1244.
- [9]. Alessandrini Aurora et.al, "Essential of Hair Care Cosmetics". Division of Dermatology, Department of Experimental, Diagnostic and Specialty Medicine, 2015; p.no. 8-10.
- [10]. Dr. Deshmukh et.al, "Consumer Buying Behaviour towards Cosmetics Products". International Journal in Management and Social Science, 2014; p.no-1246.

- [11]. VIGAN Martine et.al, “Cosmetovigilance: definition, regulation and use in practice”. Division of Dermatology and Allergy, 2014; p. no. 643-664.
- [12]. LESLIE BAILEY “A study of the factor impacting woman’s purchases of anti-aging skincare products”. women’s cosmetic and skincare brand,2014; p. no-8-10.
- [13]. Kumar H.Hemanth et.al, “ A study on Factors Influencing Consumer Buying Behaviour in Cosmetic Products”. International journal of Scientific and Research Publication, 2014;(4) ;p. no-1249.
- [14]. Vigan M, et.al, “Cosmetovigilance: Definition, regulation and use In practice.” J Dermatol 2014; p. no-643.
15.Ayenimo J.G et.al, “Iron, lead, and nickel in selected consumer products in Nigeria: a potential public health concern” .Toxicological and Environmental Chemistry,2013;(92); p. no. 51–59.