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Review Article

The Ailments and their Treatments & Function of Integumentary Systems: A Details Review

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Abstract

A details development in recent dermal studies being carried out and purposed dermal studies is investigated in this research review globally and the various disease and process functions and treatment with symptoms and etiology and pathophysiology of skin-related issues are studies and practically feasible solution of various integumentary systems related problem and it's function is researched and almost 30 types of common skin related diseases and remedies studies by researcher and it's company KIRDPL in global perspectives and especially in tropical climate zone in various cases in patients is mentioned including plastic surgery to gene therapy and dermabrasion to the genetic disease as well. The integumentary systems in the animal kingdom as a whole are focused and *homosapiens'* human dermal functions and their development and future developments of stem cells laboratory-grown skin coats of different colors for shedding and treatments of cancerous skin and integumentary system and gene therapy of the ailments are discussed.

More Information

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Introduction

The skin is the outermost layer or cover of bodies in the animal Kingdom which morphologically has different structures and functions in some cases it acts as an appendage some in tails and some in feathers all morphologically have the same functions in chordates to protect and maintain the homeostasis and metabolism of the bodies ex-situ environment they exposed and regulates accordingly but in the organism of lower invertebrates it acts as an organ system from bacteria unicellular to multicellular aquatic invertebrates fauna like octopus squid to seahorse and it's physiology in this article. Different mechanisms of the skin and its associated ailments of mammalians especially focusing on the human bodies or homo-sapiens are included in the review. Human body's integumentary systems from the neck to feet including the thoracic; lumbar and appendages limbs have the similar manifestation or cellular orientations except the foot soles and hands palms and skulls and facial muscles and testicular skins have different epithelial manifestations of fibrinogen proteins allow it to constrictions and expansions freely for thermal regulation as the testicles work at lower temprature than human bodies temprature while foot soles and palm underneath and fingernail and toe are of keratinous protein for good grips at the surface and standing against gravity and the breast nipples of male and females both have different integumentary systems cells for lactation while upper vaginal skins are of different manifestations [1-5].

The skin 2 sq m in the area divided in the epidermis mesodermal and hypodermic is the epithelial tissue having different manifestations and works in the integumentary systems of human bodies. The connective tissue inside the artery and vein is not regarded as the part of integumentary system as it is the part of circulatory system although it is deeply associated with the skin. Physiological and temprature; pressure regulation of the human organ systems and bodies like thigmotaxis; coloration; blood pressure regulation by salt balance by sweating and in some animals of reptilia insects class defense mechanisms by predators for their protections and attractions and repulsions especially in humans by different coloring in different races brown; black; white red; Mediterranean brown; white albinism etc genetically guided by the skins pigmentation and all these phenomena mostly happens in the mesodermal to a hypodermal layer of the and skinny and muscular s all appearance is the phenomena of fat accumulation in these layers as well regulating temperature by adipose tissues layering and the energy reserve currency for stamina and works.

The coloration and thigmotaxis are the biochemical

Table 1: Treatments and symptoms.	
Sl no.	**Microorganisms diseases of the skins**
1	**Lepore of skins**
	Symptoms: The muscular structures including sensory cells get damaged and appear dark with no sensation of touch at the initial stages; severe liaisons and dryness dullness no shine and seabum glandular secretion and epidermal to hypodermal sometimes cartilage and bones get softer and finally get damaged and part of that body get disappeared finally after getting rots and called leprose of the skins. It is because of the coccus bacteria called *mycobacterium leprose* infection and the complete removal of infection is possible after administration of the antibiotics pills regularly without interruption for a longer period of at least 2 to 6 months but the lost part never gets redeveloped only we can check the growth of the disease. **Treatments:** antibiotic pills clofazimine; rifampicin; and dapsone for continuous 3 to 5 months to the patients having such skin problem.
2	**Tuberculosis of skins**
	Symptoms: Dry full epidermal layer to Hypodermal venule having less Hb and damaged sebaceous glands. *Mycobacterium tuberculosis* bacteria of bacillus forms is responsible and can be checked or treated by suitable antibiotics. **Treatments:** antibiotics pills rifampicin and isoniazid for continuous 3 months to remove the infection.
3	**Skin liaisons**
	Symptoms: Ankle toe and sole foot due to faulty gaseous exchanges by perforation of the skin happens in winter mostly due to hypothermal conditions and checked by applying suitable moisture agents.
	Treatments: antibiotics ointment moisturizers nourishers glyceraldehyde and pain relievers based on conditions.
4	**Skin rots**
	Streptococcus pyrogens **Symptoms:** A bacteria enter through skin and tear and rot it by infection or fever-like conditions. **Treatments:** antibiotics rifampicin and diphtheria antitoxins or *tetani* antitoxin and antitoxins.
5	**Eczema**
	Symptoms: Due to fungal infection dry and itchy skin lesion. Chronic condition fatal for life due to internal organs infection **Treatments:** fucannzole; itereconzole antibiotics pills and ointment.
	Skin dryness
	Symptoms: Malnutrions termed as kwashiorkor. **Treatments:** proteinous diets and pills Of amino acids.
6	**Skin dullness**
	Vitamins deficiency E **Symptoms:** Skin inflammations itching and pain. **Treatments:** vitamin supplements.
7	**Sun Burns**
	Symptoms: Blackish to spotty skin itchings. **Treatments:** UV protection ointment or vitamin supplements.
8	**Skin burns**
	Symptoms: Epidermal to Hypodermal some time deep within the internal organs; healing lives scars once deeper than 12 cm burns epidermal burning heals fast with no scars. **Treatments:** Cold cream application of alcohol mild and glyceraldehyde protection of further microbial infection cleaning wounds and vitamin supplements for skin regeneration in case of hypodermal and organ burns deep grafting of skin is required.
9	**Staphylococcus bacteria**
	Symptoms: Skin liaison **Treatments:** Penicillin or rifampicin antibacterial**.**
10	**Pseudomonas aspergillus**
	Symptoms: Bacterium of N2 fixed in pulses plant sometimes contaminate human bodies through the skin leaving liaison burning itching sensation. **Treatments:** Antibacterial.
11	**HSV and HMV**
	Symptoms: Viruses Herpes zoster and herpes simplex causing itching. **Treatments:** Antiviral drugs.
12	**Acne**
13	**Parasites in skeletal muscles fleas lice and Treatments**
14	**Psoriasis**
15	**Genetic skin disease** Xeroderma Cockyne syndrome Neurofibromatosis Sclerosis Albinism Haemophilia
	Symptoms: Stunted and dull and obtuse skin without any muscular bodies. and environmental diseases UV sensitivity lesser pigmentation r melanin level Hypothermia. Hyperthermia **Treatments:** corticosteroid pills oral; genetic therapy and dermabrasion therapy retinoids Vit. A
16	**Skin cancer**
	Symptoms: The myeloma of skin cancer is quite visible when mitosis and meiosis dysfunction happen because of carcinogenic substances. **Treatments:** CIPN Chemotherapy oxaliplatin and Bortzbom; radiation energy doses through.
17	**Ichthyosis**
	Symptoms: A genetic disease in babies sometimes young ones having scaly skins mostly in premature babies and during growth, it disappears like the scales of fish species. **Treatments**: Moisturizer**.**
18	**Chromohydrosis**
	Symptoms: In some cases of hypodermal and mesodermal dysfunction with the cutaneous venule and arterioles the coloured sweating profusely excreted from skin perforation. **Treatments:**
19	**Argyria**
20	Chemical physical induced diseases Malnutrions or dietary related vitamins induced diseases
	Symptoms: Burns by electrical fire radiation or chemicals.

reactions of the nitric oxides and ions salt of sodium and potassium with different amides and acetates biochemical pumps and pathways happen in cellular ribosomal structures and generate different coloring agents and protein pigments like melanin regulate human touch follicular and sensations and odors by a substance like pheromones behavior and appearances help to select their female partners for regenerations by copulation [2-4,6].

The lack of amides and nitric oxides physiological reactions or any irregularities systems in some humans leads to the depletion of melanin in colored humans and causes albinism a diseases. The skin too protects the human body from the different invading harmful microorganisms like bacteria; viruses and fungi all reside and penetrate through the epidermal to hypodermal layer and reach different organs with different infectious diseases and it is the layers where cut burns and bruises happen and due to regeneration and mitosis processes healing and curing mechanisms through fibrinogen and lymphatic systems by thrombolysis happens and is the layers where the different sensory mesons and axons reside to regulates the sensation mechanism beneath the follicular layers through sensory systems reaches to cranial nerves in cranial systems [3,7].

So damaging acutes to chronic failures or any alteration and changes to these integumentary systems lead to several disorders and diseases causes sometimes death and fatal for life or spread out in the form of epidemics like smallpox or chicken pox and plagues and others in the past due to the contamination or damages of the integumentary systems in 17th and 18th century and recently Covid-19 epidemic oncogenic cells and pathogens lead disease too summarised in this [1,8-11](Table 1).

So in this article it's discusses different diseases and disorders their preventions and treatments associated with integumentary systems observed mostly in tropical Asian regions in detail in Table 1.

Developmental process of integumentary systems

Since the zygotes develop after fertilization and the embryo; morula and octave gastrula stages of the cells in human beings the embryonic cells start the formation of ectodermal integumentary systems in the case of *homosapiens;* human insides the uterus under the genetic description and information coded in the general of the embryo the pigmentation and other features of the derma development happens. In adults, once it gets damaged it can be reconstructed and developed by mitosis. During the fetal it passes through various developmental stages basal; granular and spinous stages following the catenin pathway notch signaling and BMP signaling pathways. The Keratin part fills the keratinous development pathway in animals like nails; hoofs; horns etc. [6,12].

Skin diseases symptoms and treatments and management [4,6,8-10,12-14] (Table 1)

Stem cell grafting and plastic surgery: Stem cell grafting is the technique to develop new skins and organs once it is damaged. By grafting the healthy tissues from another part of the body it proliferates and develops in new form to cover the damaged part of the body. The stem cell could be grafted from the patient's body itself or the other human body's fresh cells it is of embryonic or adult stages of epidermal; hypodermal cells adipose-derived stem cell grafting techniques or tissues. Plastic surgery is a process based on stem cell transplantation and it can be reconstructive breast and burns reconstruction; cosmetic facial cleft and cheekbones and nose reconstruction c and microsurgery to reconstruct damaged veins and micro artery [9,10,15,16].

Author perspectives

It is the research and case studies conducted by the author during his medical studies in colleges and universities in different life and animal sciences research for developmental purposes to get acquaints with the human integumentary systems and how to deal with it in treatments.

Recommendations

It is highly recommended for medicine practitioners and research students to get acquaints with advancement in treatments and understanding of skins.

Future directions

The future advancement in dermatological research leads towards genetic and biotechnology growth artificially and the perspectives of clinical practitioners and researchers could be updated.

Conclusion

In conclusion, it can be said that in dealing with and caring for dermal health issues a lot more is done in past and lot more yet to be discovered like in lab developments of whole body sheaths in different colors or pigmentation of different sizes like coat and transplant permanently just like shedding the skins happens in some reptilia kingdom and regarding the pathophysiology point dealing with cancer hemophilia skin tissues health all need to be working ahead in treatments and the current features of derma treatment either in the front of drugs gene therapy or laser radiation all are of advance technology available globally even in Asian regions.

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