

## **Exploratory study to evaluate the effectiveness of homoeopathic medicines in managing cases of dermatological disorders in pediatric age groups**

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**INTRODUCTION** -Pediatric skin disorders in children are very common. Skin disorders in children are not the same as those in adults.They can look different and need to be treated differently too. [4]

Skin diseases are a major health issue among children, causing a lot of discomfort and sometimes even serious health problems. [4]

About 30% of patients seen by pediatricians and dermatologists are children with skin disorders. [4]

### **ANATOMY -**

1. Definition: The skin is a protective covering of the body.[3]

Skin covers the entire surface of the human body.[3]

2 . Synonyms:

- Cutis (L)
- Derma (G)
- Integument
- It is continuous with the mucous membrane at the orifices of the body.

3. Pigmentation of skin:

- The color of the skin is determined by at least five pigments present at different levels and places of the skin, These are :
- Melanin
- Melanoid
- Carotene
- Haemoglobin
- Oxyhaemoglobin

4. Thickness of Skin : about 0.5 to 3 mm.

5.Structure of Skin:

- Composed of two layers —> Epidermis outer & Dermis inner. [1]

### **PHYSIOLOGY -**

1. Protective Function
2. Sensory Function
3. Storage Function
4. Synthetic Function
5. Regulation of body temperature
6. Regulation of water & electrolyte body

- 7. Excretory Function
- 8. Absorption Function
- 9. Secretory Function

**ETIOLOGY** -Children’s skin diseases are influenced by factors such as over crowded places, industrial areas, environmental factors, poor hygiene, low socioeconomic factors, genetics and culture, which can contribute to their impact on children’s well-being, chronic and severe skin diseases can also have psychological effects on children. [4]

**EPIDEMIOLOGY AND PREVALANCE** - These diseases have varying incidence rates worldwide, ranging from 9% to 37%. It's important to assess and treat these disorders differently from those in adults because they present differently, have different outcomes, and require specialized care. [4]

The research found that there are various common skin conditions in children, including eczemas (8.6%), pigmentary disorders (5.7%), insect bite reactions (5.2%), miliaria (4.1%), nutritional deficiency-associated dermatoses (2.8%), urticaria (2.5%), genetic disorders (2.1%), psoriasis (1.4%), hemangiomas (0.5%) and drug eruptions (0.3%). [5]

**ICD CLASSIFICATION** - According to ICD - 10 classification of WHO pediatric dermatological disorders is listed under code L - 98.9 [12]

**CLASSIFICATION -**

**1. Infectious Diseases In Children :**

Sr. No	Skin disorders	Age Group	Causative Agent	Sign & Symptoms
1	Impetigo	2 to 5 Years	- Staphylococcus & streptococcus aureus - By insects bites, abrasion, lacerations, burns	- Surface - Face, trunk, extremities, buttock and perineum. - Tiny vesicle or pustule - Honey coloured clustered plaque - Spread- by fingers, clothing
2.	Cellulitis	3 to 5 Years	- B.streptococci - Animal - Pasteurella multocida - Humans -Eikeiella corrodens; - Surface - Neck,	- Warm, Red, Tender, Edematous plex with ill defined borders - By regional Lymphadenopathy, Fever, Chills, malaise & constitutional symptoms - Spread by Animal bites

			Face & extremities	
3	Molluscum Contagiosum	2 to 6 Years	- Pox Virus	- Discrete, pearly, Skin Colored, Dome Shaped, Smooth papules, - Surface - Face, eyelids, neck, axillae, thighs & genitals area - Spread - by contaminated objects, swimming pool, contact with infected person
4.	Varicella (Chicken Pox)	5 to 10 Years	- Varicella Zoster Virus	- Vesicular rash - Papules, Clear fluid filled vesicles, Clouded Vesicles & crusted Vesicles - Moderate fever, Malaise headache & anorexia - Appears on face, extretimitis & other body parts - Spread - Transmitted by airborne & through direct contact - Portal entry - Respiratory tract
5.	Herpes Zoster (Shingles)	At any age	- Varicella Zoster Virus (Human Herpes Virus - 3)	- Erythematous macules, Group Vesicles, - Neuralgic pain, Fever (102° F - 103° F), Rash, Skin inflamed
6.	Tinea Capitis	4 to 14 Years	- Trichophyton tonsurans	- Prominent on the crown & occipital regions with scaling - Spores in sheath like fashion around the hair shaft - Circular patches of partial alopecia with thin grayish scalas - Broken lustreless stumps of hair - Spread - Contact with infected hairs & theater seats, hats, combs - Transmission through clothing, bedding, toys
7.	Tinea Corporis	Child hood	- T.Rubrum & Trichophyton Mentagrophytes	- Glabrous Skin (Excluding Palms, Soles & Groin) - Acquired by direct contact with infected person - By contacted with infected scales or hairs

				<ul style="list-style-type: none"> <li>- Lesions - Dry mildly erythematous elevated scaly papules</li> <li>- Spread - Infected human being, animals particularly cattle</li> </ul>
8.	Scabies	At any age	- Caused by human mite, sarcoptes scabiei	<ul style="list-style-type: none"> <li>- Papules on the wrist, fingerwebs, periaxillary skin, genitalia and abdomen.</li> <li>- Multiple excoriations, erythematous papules, honey coloured crusts, pruritis,</li> <li>- Human contact or contagious clothing or bed sheets.</li> </ul>

**2. Non Infectious Diseases in Children :**

Sr. No.	Skin disorders	Age Group	Causative Agent	Sign & Symptoms
1.	Dermatitis 1.1 Atopic Dermatitis (Eczema)	Infancy (After 3 months of age)	- Strong familial predisposition to allergic diseases like asthma, Eczema, Hay fever	<ul style="list-style-type: none"> <li>- Acute, Sub acute or chronic relapsing endogenous eczema</li> <li>- Itchy erythematous papulo vasicales</li> <li>- Dry lichenified &amp; crusted plaques on antecubital fossa &amp; popliteal fossa, Neck, eyeleads</li> </ul>
	1.2 Infantile Seborrheic Dermatitis	4 - 6 week of age (Infancy)	<ul style="list-style-type: none"> <li>- Excess sebum accumulation</li> <li>- Malassezia furfur</li> </ul>	<ul style="list-style-type: none"> <li>- Location - scalp, mid face, mid chest, perineum</li> <li>- Lesions - greasy, yellowish scale, salmon-coloured, erythema, pruritus</li> </ul>
	1.3 Diaper Dermatitis	Between 7-12 months of age	- Prolonged contact with feces and ammonia	<ul style="list-style-type: none"> <li>- Involves convex surface of buttocks, upper thighs, abdomen, spares inguinal folds</li> <li>- Shallow or deep ulcers, beefy red, confluent erythema, pustules</li> <li>- Yellowish pink scales</li> <li>- Shows moist, glazed erythematous lesions</li> </ul>

	1.4 Contact Dermatitis	Develops within a few hours after contact in offending agent	<ul style="list-style-type: none"> <li>- Plants</li> <li>- Clothing and footwear</li> <li>- Cosmetics</li> <li>- Occupational chemicals</li> <li>- Medicaments</li> </ul>	<ul style="list-style-type: none"> <li>- In dry climates</li> <li>- Erythematous pruritic patches and plaques with ill defined border</li> <li>- Lesions - face, lips, neck, axillae, genitals and anal region, buttocks, hands, thighs</li> </ul>
2.	Urticaria	Highest at puberty	<ul style="list-style-type: none"> <li>- Caused by degranulation of mast cells with release of histamines</li> </ul>	<ul style="list-style-type: none"> <li>- Red wheels occur which are very pruritic last for 24-72 hours</li> <li>- Onset is sudden and abrupt</li> <li>- Severe, annoying itching, burning and sense of heat</li> <li>- Can be brought on by cold winds bath, spicy food, psychogenic stress</li> <li>- Offending drugs - penicillin, aspirin, cephalosporins</li> </ul>
3.	Miliaria	Develops in first few weeks of life	<ul style="list-style-type: none"> <li>- By obstruction of the eccrine ducts that leads to retention of sweat in the skin</li> </ul>	<ul style="list-style-type: none"> <li>A. Miliaria Crystallina -</li> <li>- Generalized small clear vesicles.</li> <li>- Appears in intertriginous areas.</li> <li>- Due to sunburn, over heating.</li> <li>B. Miliaria Rubra - in febrile, overheated infants or hot weather.</li> <li>- Generalised non follicular papules, vesicles, pustules with erythematous base</li> <li>C. Miliaria Profunda - appears as erythematous based papules and pustules</li> <li>- Prevent adequate sweating from hyperthermia</li> </ul>
4.	Acne Vulgaris	8 - 14 years	<ul style="list-style-type: none"> <li>- Develops due to pilosebaceous units</li> <li>- Increased sebum secretion</li> <li>- Microbial colonization</li> <li>- Occlusion of pilosebaceous orifices</li> </ul>	<ul style="list-style-type: none"> <li>- Lesion Types -</li> <li>A. Obstructive (blackhead and white head)</li> <li>B. Inflammatory (papules, pustules, cysts, sinus tracts)</li> <li>C. Scars (depressed, pitted, macular, papular, keloidal)</li> <li>- Develops in areas of the face, chest, and back</li> </ul>

**3. Climacteric Skin Diseases :**

Sr. No	Skin Diseases	Age Group	Causative Agent	Sign & Symptoms
1.	Chilblains (Pernio)	At any age	<ul style="list-style-type: none"> <li>- Only during the cold, damp weather</li> <li>- Non freezing disorders</li> </ul>	<ul style="list-style-type: none"> <li>- Occurs on fingers and toes , less often on heels, nose and ears</li> <li>- Itching, tenderness and burning sensation</li> <li>- Single or multiple erythematous macules, papules, rare blistering</li> </ul>
2.	Intertrigo	Anyone at any age	<ul style="list-style-type: none"> <li>- By friction, heat and moisture</li> <li>- Retention of sweat</li> </ul>	<ul style="list-style-type: none"> <li>- Occurs in skin folds (folds of neck or axillae, groins) there is opposition of skin</li> <li>- Develops well - demarcated erythematous, macerated patches, burning and tenderness</li> <li>- In plethoric, debilitated and over dressed individuals, obesity</li> </ul>
3.	Xerosis	At any age	<ul style="list-style-type: none"> <li>- Dryness and dehydration of epidermis</li> <li>- Low humidity</li> </ul>	<ul style="list-style-type: none"> <li>- Dryness scaling and cracking</li> <li>- Hands and lower legs most frequently involved</li> <li>- Occurs in winter</li> <li>- Fissures may be erythematous</li> </ul>

**4. Autoimmune Diseases :**

Sr No	Skin Disorders	Age group	Causative Agent	Signs & Symptoms
1.	Alopecia Areata	Below 16 years of age	<ul style="list-style-type: none"> <li>- Unknown etiology</li> <li>- Usually thought of autoimmune diseases</li> </ul>	<ul style="list-style-type: none"> <li>- Sudden onset of asymptomatic well defined oval or round patches are hair loss</li> <li>- Sign of inflammation, scarring or atrophy</li> <li>- Hair pores are visible.</li> <li>- Affects selectively the scalp or hairy region of the body</li> </ul>
2.	Psoriasis	Cases develop in infancy	<ul style="list-style-type: none"> <li>- Disorder of keratinization</li> <li>- Basic defect of rapid replacement of epidermis</li> </ul>	<ul style="list-style-type: none"> <li>- Common areas affected - scalp, back of elbows, front of knees, legs and lower part of the back of the trunk</li> <li>- Classical lesions - well circumscribed erythematous plaques with silvery scale</li> <li>- Pinpoint bleeding when removed</li> <li>- Pink plaques</li> <li>- Plaque type - linear, annular, figurate, follicular</li> </ul>
3.	Vitiligo	5-15 years of age	<ul style="list-style-type: none"> <li>- Nutritional defects</li> <li>- Infection and</li> </ul>	<ul style="list-style-type: none"> <li>- Completely depigmented macules(isolated, unilateral or symmetrical) and patches varying sizes</li> </ul>

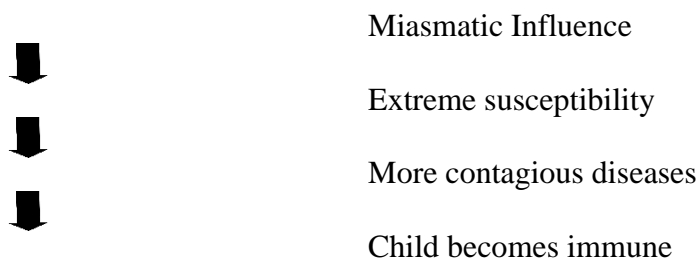
			toxic - Polygenic disorders - Mechanism of destruction of melanocytes	and shapes - Lesions - chalky white, round or oval with fairly distinct margins. - Beside loss of color no other structural changes - Involving extensor surfaces of distal digits, knees, elbows and periorificial areas - Associated with thyroid disease, Addison's disease, pernicious anemia
4.	Avitaminosis	At any age	- A poor, unbalanced diet, - Digestive upsets (Chronic Diarrhea, dysentery & ulcerative colitis)	- Deep painful swelling in the limbs, anorexia, dry scaly skin, sparse hair & pruritus - Fine wrinkling, pigmentation of exposed parts, atrophic nails - Sign of malnutrition - Deficiency of vitamins, proteins, fats & minerals in the body

**CONVENTIONAL MANAGEMENT** - Number of drug regimens have been advised for the management of skin diseases in modern medicines like antibiotics, antihistamines, antifungal agents, sedatives, tranquilizers, metal, vasodilators, liniments, ointments, lotions. [3]

**HOMEOPATHIC MANAGEMENT** - Homeopathic literature enlists many medicines for skin diseases such as Antimonium crudum, Psorinum, Graphits, Cina, Chamomilla, Petroleum, Sulphur, Aconite, etc.[9]

**MIASMATIC BACKGROUND -**

Susceptibility in children -



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