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Study of Dermatitis in Infants

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Abstract: ***Introduction: It has been suggested that the period immediately after birth is a sensitive period for the development of dermatitis. Eczema or dermatitis is a skin rash that commonly appears in infants. In babies it tends to show up on the cheeks and scalp, but it may spread to the arms, legs, chest, or other parts of the body. Aims and objectives: To study the various dermatitis in infants. To recognise and investigate for associated systemic manifestations. Materials and methods: We prospectively enrolled and analysed 700 patients with various dermatoses in infants from July 2010- December 2012 in the Department of Dermatology. The complete clinical history was taken and complete physical examination was performed. Types of clinical lesions and their distribution along with mucous membrane lesions were noted, any change in hair, nail, teeth was noted***

Keywords: Eczema, dermatitis, Atopic, diaper,seborrheic

1. Introduction

The skin of the infant differs from that of adult. It is thinner and the body surface area-to-weight ratio of an infant is five times that of an adult. Premature infants have an increased TEWL, which may result in morbidity because of dehydration, electrolyte imbalance, and thermal instability.

2. Eczematous Eruptions in Infants

Atopic dermatitis[1]

Onset usually from age 2 to 12 months and almost all cases by age 5 years. More than two thirds has personal or family history of allergic rhinitis, hay fever, or asthma. Genetic factors, stress, climate, infections, irritants, and allergens seem to play a role in etiopathogenesis of the disease in many patients as well. Skin findings shows patches and plaques with scale, crust, and lichenification. Lesions are usually confluent and ill defined. Atopic children may demonstrate increased palmar markings, periorbital atopic pleats (dennie-morgan lines), keratosis pilaris, or white dermatographism.

Infantile atopic dermatitis[2].

The lesions most frequently start on the face, but may occur anywhere on the skin surface. Often, the napkin area is relatively spared. When the child begins to crawl, the exposed surfaces, especially the extensor aspect of the knees, are most involved. The lesions consist of erythema and discrete or confluent oedematous papules. The papules are intensely itchy, and may become exudative and crusted as a result of rubbing.

Nummular eczema

Nummular eczema[3] is a chronic, pruritic, inflammatory dermatitis occurring in the form of coin-shaped plaques. It is seen in individuals with dry skin and/or atopic dermatitis. Skin lesions closely grouped, small vesicles and papules that coalesce into lichenified plaques, often 3 to 5 cm deeply erythematous to hyperpigmented round or coin-shaped over extensor surfaces of hands, arms, legs.

Contact dermatitis[10]

Allergic contact: dermatitis is caused by sensitization of the skin to a topical allergen with type IV hypersensitivity. Exposure to an antigen that has previously caused sensitization in the case of allergic contact. Irritant contact dermatitis is caused by mechanical or chemical injury to the skin without specific immunity.A primary irritant that produces inflammation via injury in the case of irritant contact.

- *Acute* inflammatory papules and vesicles coalescing into plaques.
- *Subacute* patches of mild erythema showing small, dry scales.
- *Chronic* patches of lichenified firm, rounded or papules, excoriations, and pigmentation

Seborroeic dermatitis[4]

It is a recurrent, waxing and waning dermatosis, which occurs on the areas of the skin in which the sebaceous glands are most active, such as the face and scalp, and in the diaper area.It starts in the napkin area or on the face and scalp.The lesions presents as well-defined areas of erythema and scaling with tiny vesicles. The scales are adherent are yellow-brown in colour, large in size and greasy.

Shampoos containing selenium sulfide, zinc pyrithione, tar, or ketoconazole used intermittently 2 to 3 times a week can control the eruption.

Creams containing ketoconazole are helpful and safe. Low potency topical steroid preparations may be used bid sparingly for 2 to 3 days for acute flares.

Perioral dermatitis[5]

Erythema of the perioral skin makes its initial appearance during the first 8 days of life[5,] Healing occurs spontaneously in 7–8 weeks. The affected area should be washed with water and a water-miscible emollient as soon as possible after defecation and a protective lubricants applied.

Diaper dermatitis[6,7]

Infants' faeces contain substantial amounts of pancreatic protease and lipase[6] .The most common form of primary

irritant napkin dermatitis comprises confluent erythema of the buttocks, the genitalia, the lower abdomen and pubic area and the upper thighs[8]. Friction is also an important factor Routine skin care in the napkin area and a water-repellent emollient ointment should be applied.

Wiskott-aldrich syndrome
XR disorder, which consists of recurrent pyogenic infectiors, thrombocytopenia and platelet dysfunction, and recalcitrant dermatitis. bleeding is the most common manifestation.

Intertrigo[9]
Intertrigo is a superficial inflammatory dermatitis that occurs in areas where the skin is in opposition. The affected areas become erythematous, macerated, and secondarily infected. Dusting powders, topical corticosteroid lotion, appropriate antibiotics or fungicidal agents may be used.

Asteotic eczema
It is a subacute eczematous dermatitis characterized by pruritic scaly erythematous patches, usually associated with dryness and dehydration of the epidermis.

3. Materials and Methods

We enrolled and analysed 700 patients with various dermatoses in infants from July 2010- December 2012 in the Department of Dermatology. The complete clinical history was taken, including age of onset, religion, presenting features, family history, birth history were noted. Complete physical examination was performed. Types of clinical lesions and their distribution along with mucous membrane lesions were noted, any change in hair, nail, teeth was noted. General and systemic examinations were performed.

4. Results and Discussion

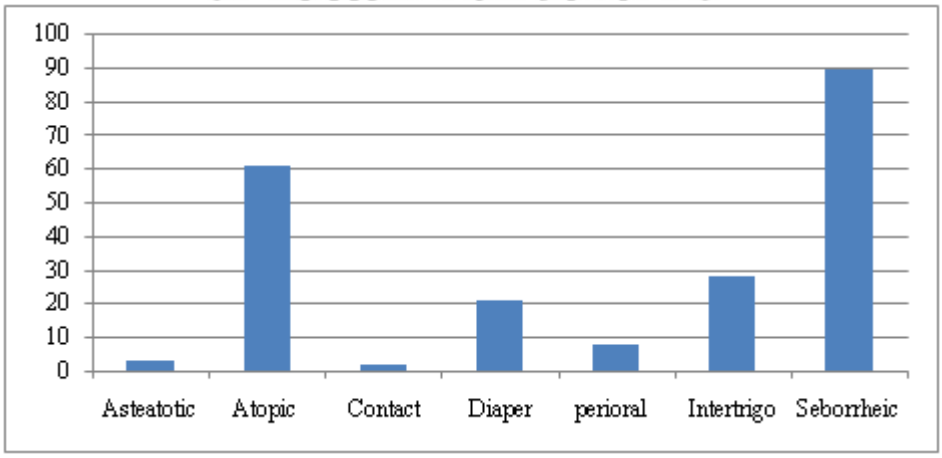
The study of 700 cases below one year of age were classified according to the clinical manifestation, age and sex distribution.

Male	376
Female	324
Total	700

Age and sex distribution: Out of 700 pt 376 (54%) were male and 324(46%) were female
The distribution of various dermatological conditions in infantile age group showed that dermatitis was most common among all the conditions where as the congenital, genetic and autoimmune conditions were less common.out of 700 infants 227 were of dermatitis(32.4%).99 were male and 128 were females.

Table 1

				Total
		F	M	
	Asteatotic eczema	0	6	6
	Atopic dermatitis	23	40	63
	Contact dermatitis	0	5	5
	WAS	0	0	0
	Nummular eczema	0	0	0
	Diaper dermatitis	9	13	22
	Irritant dermatitis	0	0	0
	Perioral dermatitis	6	5	11
	Intertrigo	11	19	28
	Seborrheic dermatitis	50	40	90
Total		99	128	227



Maximum infants were of seborrheic dermatitis(40%) followed by atopic dermatitis (27%). Out of 227 infants 79.2%(180) were low birth weight. among them 48.4% were female and 30.8% were male.

5. Conclusion

This study shows that a high birth weight and day care attendance decrease the risk of dermatitis in the first year of

life and exclusive breastfeeding is a protective factor when dermatitis is found.

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