

# Incidence Of Physiological And Pathological Skin Changes In The Newborn

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## Abstract

Sir,

The neonatal period i.e. first 28 days of life is one of the rapid adaptation in which the skin plays an important role and for the first time fully assumes its function as a barrier and thermo regulator. About 96% to 99.3% of all newborn babies suffer from one or the other dermatosis if skin examination is carried out as discussed by Moosavi Z [1] and Rivers JK [2] but pathological skin changes were observed in 41.2% neonates only by Nobbay et al [3].

Therefore the objectives of our study were:

A prospective cohort/ cross sectional descriptive study comprising of thorough dermatological examination of 250 unselected newborn babies from 0 to 5 days of age in the Department of Obstetrics and Gynecology, was done.

The variables recorded in each case were parity of mother, mode of delivery, the sex, birth weight and gestational age at the time of first examination. Whenever required, simple noninvasive investigations were performed.

The neonate was examined daily for 5 days and all dermatological findings were noted. The lesions were studied to assess the relationship between their occurrence and the various maternal/ neonatal aspects and finally the results were tabulated.

Figure 1

Showing incidence of cutaneous lesions in 250 new borns														
Sr no	Cutaneous lesions in newborns	no. of cases	%age	Gravid status of mothers		Mode of delivery		Sex incidence		Gestational age		Birth weight of newborn		
				Primigravida	Multipara	Normal delivery	Cesarean section	No. of Males	No. of Females	Pre-term	Term	<2.0 kg	2.0-2.5 Kg	>2.5 Kg
1	Physiological													
	Icterus	62	24.8	20	32	41	21	42	20	6	46	7	16	39
	Superficial cutaneous desquamation	88	35.2	37	51	45	43	49	39	6	82	6	37	45
	Sebaceous gland hyperplasia	53	21.2	22	31	32	21	26	27	5	48	3	17	23
	Milia	64	25.6	26	48	32	32	36	28	4	60	6	26	32
	Epstein pearls	139	55.6	48	91	73	66	52	87	11	128	6	61	72
	Mongolian spots	149	59.6	54	95	73	76	91	58	12	137	7	67	75
2	Transient Non infective diseases													
	Erythema toxicum neonatorum	53	21.2	16	37	25	28	32	21	2	51	2	24	27
	Miliaria rubra	51	20.4	18	33	24	27	31	20	3	48	5	21	25
3	Naevi and other developmental defects													
	Salmon patch	31	12.4	9	22	16	15	20	11	2	29	1	10	20
4	Dermatitis													
	Cradle cap	25	10	13	12	12	13	11	14	1	24	2	8	15

The order of frequency observed in the physiological skin changes was Mongolian spots in 149(59.2%), Epstein pearls in 139(55.6%), superficial cutaneous desquamation in 88(35.2%), milia in 64(25.6%), icterus in 62(24.8%), sebaceous gland hyperplasia in 53(21.2%). This was in accordance with study by Sachdeva et al [4] which concluded the incidence of physiological changes in descending order of frequency as Epstein pearls in 61%, Mongolian spots in 60.2%, superficial cutaneous desquamation in 40%, milia in 23%, sebaceous gland hyperplasia in 21.4%.

Of the transient non-infective skin diseases, erythema toxicum neonatorum was observed most commonly in 53(21.2%) newborns.

The naevi and other developmental defects, salmon patch was observed most commonly in 31(12.4%) newborns.

Epstein pearls were more among males compared to females and more among term babies. A higher incidence was observed in multipara and in babies weighing more than 2.5 Kg.

Mongolian spots were seen more commonly among term

babies and more in males. A higher incidence was observed in multipara and in babies with higher birth weight.

Superficial cutaneous desquamation was observed more among males than females and more among term babies. A lower incidence was observed in primipara and in babies weighing less than 2.0 Kg. The incidence was same in case of normal delivery (50.5%) and in case of caesarean section (49.5%) contrary to the observations of Zagne V et al [5].

The incidence of icterus was more among males than females and more among preterm babies. It was seen more commonly in babies delivered by the normal vaginal route and in babies weighing more than 2.5 kg. A higher incidence was observed in multipara.

Milia were seen more commonly in babies weighing more than 2.5 Kg (50.4%) and in multipara.

Sebaceous gland hyperplasia was seen more commonly in babies delivered by the normal vaginal route, more in multipara and in babies weighing more than 2.5 Kg.

Erythema toxicum neonatorum was seen among term babies and more commonly in males. A higher incidence was observed in multipara and in babies with more birth weight. The observations were in concurrence with Nanda et al [6]. Its low incidence in preterm neonates could be due to immunological immaturity of the neonatal skin responses.

The incidence of miliaria rubra was more in males and more among term babies. It was seen more commonly in babies

delivered by caesarian section and in babies with more birth weight. A higher incidence was found in multipara. The exclusive prevalence of miliaria in term babies rather than preterm babies was probably because of immaturity of cutaneous response to environmental factors in preterm babies [7].

The incidence of salmon patch was low in primi gravida and in low birth babies as observed by Drolet et al [8].

Cradle cap was seen more commonly in term babies and in high birth weight babies.

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