A Study on Neonatal Dermatosis in a Tertiary Care Hospital of Western Uttar Pradesh India

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Abstract

The aim of this study is to assess the frequency of both physiological and pathological cutaneous lesions in first seven days of life in a tertiary care hospital of western Uttar Pradesh. Overall 500 neonates either inborn or attending paediatric OPD/ clinic and delivered in the hospital were included in the study. The study took 6 months, consent from parents of those neonates were taken. Clinical examination, dermatological examinations were carried out to check their eligibility to enter this study and to diagnose the skin lesions. Consultations to dermatologists were done in the beginning of the study, especially, in the doubtful cutaneous lesions. Skin lesions were present in 476 (95.2%) neonates. Of these 60 neonates (12%) have pathological lesions, 430(86%) had only physiological lesion, while 14 neonates (2.95%) had both physiological and pathological lesions. Of physiological lesions Epstein pearls were most common (78%) second most common lesion was Mongolian spots (66%), desquamation was seen in 52% cases, & milia (42%). Pathological lesions pustulosis was most common seen in 28% cases; second most common lesion was oral thrush (26%).

Keywords: Skin lesions; Physiological; Pathological; Neonates

Introduction

Dermatosis in neonatal period is very common and important cause of parental anxiety seeking paediatric consultation. The majority of neonatal cutaneous lesions are usually physiological, transient and self limited, while only are pathological requiring treatment. However, it is important to indentify and diagnose them correctly so as to avoid unnecessary diagnostic or therapeutic interventions. Few lesions can be cutaneous manifestation of potentially fatal systemic condition, so early diagnosis of pathological neonatal dermatosis helps in initiating early specific therapy. The aims of study were to ascertain the common dermatosis among neonates (both physiological and pathological) within 7 days of life from rural and suburban background attending paediatric OPD / vaccination and delivered in our institute.

Objective

To study the prevalence of neonatal dermatosis in new-borns within first seven days of life attending paediatric OPD, vaccination clinic and delivered in institute which is a tertiary care hospital.

Inclusion criterion

Full term neonates with birth weight >2.5 kg either inborn or who are attending paediatric OPD / vaccination clinic.

Less than 7 days of life.

Exclusion criterion

Preterm and IUGR (Intra Uterine Growth Retardation) neonates.

Neonates born to mother with any medical illness.

Neonates born to mother with history of drug and alcohol abuse.

Neonates with gross congenital malformations.

Neonates with history of hospitalization.

Material and Method

A prospective clinical study was done involving 500 neonates who presented to us in first 7 days of life in OPD/ vaccination room and inborn over a period of 6 months. Informed consent was taken from neonate’s mother or guardian.

After taking relevant maternal as well as neonatal history, the entire skin surface of the neonate, including the scalp, mucous membranes, genitilia, hair and nails were examined in proper ambient temperature and adequate light. Proper hand washing and sterilisation procedure were done before examination of neonate. All physiological and pathological skin changes were observed, recorded and analysed. Clinical examination of mother or any other close contact was recorded when required. Diagnosis of skin lesions was done by paediatrician under clinical impression, in few cases consultation with dermatologist were taken to clarify the diagnosis.

Results

500 babies were examined over a period of 6 months. Skin lesions were present in 476 (95.2%) neonates. Of these 60 neonates (12.60%) have pathological lesions, 402 (84.45%) had only physiological lesion, while 14 neonates (2.95%) had both physiological and pathological lesions (Table 1).

Of physiological lesions Epstein pearls were most common (78%) second most common lesion was Mongolian spots (66%), desquamation was seen in 52% cases, milia (42%), sebaceous hyperplasia in 40% cases, & oral thrush (26%).


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Iranian study [4] was near to our study except erythema toxium as the of about 21% and erythema toxium has higher frequency of 68%.

In the neonates included in this study. While in Jordian study [3] which desquamation, and milia are the skin lesions which are commonly seen in new-borns must be distinguished from more serious disorders with cutaneous manifestations, and recognition of these dermatoses allows further evaluation or treatment as necessary [2]. Hence, it is important for the paediatrician to recognize these physiological states and to differentiate these from pathological states. Benign dermatoses in new-borns must be distinguished from more serious disorders with cutaneous manifestations, and recognition of these dermatoses allows the physician to proceed appropriately, reassure the parents and initiate further evaluation or treatment as necessary [2].

In our study we found that Epstein pearls, Mongolian spots, desquamation, and milia are the skin lesions which are commonly seen in the neonates included in this study. While in Jordanian study [3] which has almost same findings except desquamation as the lowest frequency of about 21% and erythema toxium has higher frequency of 68%. Japanese study [5] was also near to our study with 40% frequency of it; while Indian study reported 20% [6] pageant [7] and the finish survey conducted in Australia by Rivers [10] their results resemble to great extent those of the American survey.

A similar result was seen at the French study [11], which was conducted at the maternity ward of Brest university hospital. Erythema toxium was the commonest neonatal skin lesion with a rate of 103 /142; they suggested that erythema toxium is more common in the Caucasian population than coloured population.

In contrast, the Indian study [6] scored the lowest rate for frequency of erythema toxium, which is (20%), which may give a clue that a racial factor may came into play.

None, of the above study takes in consideration the incidence of pathological lesions, which are not very uncommon in neonates especially in circumstances where hygiene conditions are not very good. In our study we found that pathological lesions were also very frequent in our clinical setup with incidence of 12%.

**Conclusion**

Skin lesions are very common in neonatal period. Most of the skin lesions in this period are innocent and transient but pathological lesions are not very uncommon especially in our settings where hygiene conditions are not very healthy. So any cutaneous lesion during this period should be carefully examined and should be differentiated from more serious skin conditions in order to avoid unnecessary therapy to neonates and to reassure parents about the good prognosis of these skin manifestations.

**Recommendation**

We recommend early are careful evaluation of neonatal dermatitis to avoid unnecessary anxiety to parents and to rule out pathological lesions, which can lead to more serious health issues in neonates.

**Discussion**

Skin rashes are common in neonate and can cause parental anxiety. Many of these are transient and physiological, but some may require additional work up rule a more serious disorder [1]. Hence, it is important for the paediatrician to recognize these physiological states and to differentiate these from pathological states. Benign dermatoses in new-borns must be distinguished from more serious disorders with cutaneous manifestations, and recognition of these dermatoses allows the physician to proceed appropriately, reassure the parents and initiate further evaluation or treatment as necessary [2].

Our study found that Epstein pearls, Mongolian spots, desquamation, and milia are the skin lesions which are commonly seen in the neonates included in this study. While in Jordanian study [3] which has almost same findings except desquamation as the lowest frequency of about 21% and erythema toxium has higher frequency of 68%. Japanese study [5] was also near to our study with 40% frequency of it; while Indian study reported 20% [6] pageant [7] and the finish study [8] reported erythema toxium frequency 34% and 70%. Mallory 1991 [9] conducted a survey in USA and found that each and every neonate has one form of skin lesion early after delivery. He found that the commonest lesions were as follows: desquamation, Epstein pearls, sebaceous hyperplasia, milia, toxic erythema, salmon patch, hypertrichosis and the Mongolian spots. This result to a greater extent resembles our study.

In the prevalence survey conducted in Australia by Rivers [10] their results were as follows, desquamation (65%), followed by Epstein pearls (56%), sebaceous hyperplasia (48%), milia (36%), but their results regarding erythema toxium was (34%) and salmon patch (32%). Their results resemble to great extent those of the American survey.

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**References**