

# Neonatal tinea corporis: A case series from Eastern India

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**Abstract** Dermatophyte infection is rare in infancy; neonatal infection is still very rare. The present communication describes 6 cases of neonatal tinea corporis in neonatal intensive care unit admitted babies during the period of 2 years. Youngest age of presentation is at 7<sup>th</sup> day of life followed by 15<sup>th</sup>, 20<sup>th</sup>, 22<sup>nd</sup>, 25<sup>th</sup> and 28<sup>th</sup> day of their life and respective mothers are also affected. Out of 6 tinea infected babies, 4 babies are delivered at preterm and rest two babies at full term. Increasing cases of neonatal tinea corporis signifies the permeable humid environmental condition and communal care of the baby by existing infected female population.

**Key words**

Tinea corporis; Neonate.

## Introduction

Neonatal period is defined as the first four weeks of life during which skin is delicate, thinner, produces lesser sweat and sebum with weaker intercellular attachments.<sup>1</sup> Dermatophyte infection is rare in infancy; neonatal infection is still very rare. Sebum has antibacterial and antifungal properties and sebum secretion is comparatively high in the neonates which may be reason for lower incidence of tinea corporis in neonates.<sup>1</sup> there are case reports of neonatal tinea infections in the literature and the age of onset ranged from 2 to 28 days in these cases reported earlier.<sup>2-5</sup>

Here we are report 6 cases of tinea corporis in neonates admitted in NICU of a tertiary care Centre from eastern India observed during the period of 2 years .A record is made on their age,

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sex, maturity, the site and number of lesions, duration of symptoms, family history of similar lesions and environmental factors. Cases have been diagnosed clinically.

## Case report

All the 6 tinea infected neonates of this study are males presented during 7<sup>th</sup>, 15<sup>th</sup>, 20<sup>th</sup>, 22<sup>nd</sup>, 25<sup>th</sup> and 28<sup>th</sup> day of their life. Out of 6 tinea infected babies, 4 babies have delivered at preterm and rest two babies at full term (**Table 1**). All the mothers of tinea infected babies are also affected by tinea corporis. Infected babies had single or multiple well defined erythematous annular scaly plaques with raised margin typical of tinea corporis (**Figure 1-3**).

All the babies have been treated with topical antifungal agent i.e. clotrimazole cream for 2 to 3 weeks and the lesions subsided gradually. Infected mothers and family members are also treated simultaneously. Recurrence was not observed in the neonates during follow up after 2 months.

**Table 1** Distribution of cases (n=6) of neonatal tinea corporis.

Parameter	Baby 1	Baby 2	Baby 3	Baby 4	Baby 5	Baby 6
Age (days)	7	15	20	22	25	28
Sex	M	M	M	M	M	M
Maturity	pre term	Full term	preterm	full-term	preterm	preterm
Site of lesions	Trunk	trunk	legs	trunk	Face, hand, Trunk	Trunk, thighs
Number of lesions	Multiple	Single	Multiple	Multiple	Single	Single
Duration of lesions (days)	2	4	2	1	4	5



**Figure 1-3** Multiple lesions of tinea corporis in neonates.

## Discussion

All the 6 tinea infected neonates of this study are males and the respective mothers are also affected. The source of infection in these cases may be mother who repeatedly handles the baby. Other sources of infection could be infected family members, fomites or soil. Out of 6 babies, 4 preterm babies had tinea infection. Reduced barrier function of the skin in preterm neonates would have accounted for tinea infection in preterm babies.<sup>12</sup> Other factors such as immature microbial flora and weaker immune responses allows extensive spread of dermatophyte infection in early neonatal period.<sup>13</sup> Neonatal tinea is very rare, but few case reports at 21<sup>st</sup>, 8<sup>th</sup>, 6<sup>th</sup> and 2<sup>nd</sup>-day-of neonatal period have been reported.<sup>7</sup> Interestingly a report of tinea corporis over the face in a 6 hours old neonate has been reported by Lynch in 1876 however this was not documented with KOH mount or culture.<sup>8</sup> Baruah *et al.* noted a case of tinea corporis in a 16 day old neonate.<sup>9</sup> Incubation period of tinea

infection ranges between 1-3 weeks, but shorter incubation period has also been observed experimentally.<sup>10</sup> Environmental factors such as high humidity, warm climate, higher temperature maintained in newborn intensive care unit and contact with infected mothers may be responsible for the unexpected raise of tinea in newborns. Chronic and recurrent tinea corporis is very common infection among adults in these areas. In the present study infected mothers, higher temperature in the NICU and high humidity especially in this eastern part of India would have favored for such an observation. Hence infected tinea population especially females should be treated appropriately. Many tinea cases observed at an early age of life prompted us to report. The appearance of lesions in a 7 days old neonate in the present study is interesting.

## Conclusion

In this study 6 neonates had tinea corporis which signifies the permeable humid environmental

condition and communal care of the baby by existing infected female population. Present study strongly insists on appropriately treating tinea infected females to prevent spread of tinea infections to neonates.

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