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Case Report

Collodion baby: A case report

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ABSTRACT

Collodion baby is a genodermatosis in which neonate's whole body is covered with thick skin termed as collodion membrane. Majority of collodion baby eventually develop autosomal recessive congenital ichthyosis. It is associated with high morbidity and mortality.

Keywords: Collodion baby, congenital disorder, genodermatosis

INTRODUCTION

About 270 cases of collodion baby have been reported since 1884.[1] It is a congenital disorder, occurring with an incidence of 1:300,000 live birth[2] and both gender are equally affected.[3] Collodion baby is also known as collodion fetus.[4] Collodion baby is characterized by shiny, tight, cellphone-like membrane stretched over the skin.[5] The collodion membrane is a temporary condition, which desquamates later on, and ultimately these children manifest sign of ichthyosis. About 45% of collodion babies develop some complication due to compromised skin barrier function. It is associated with mortality rate of approximately 11%.[6]

CASE REPORT

A 2-day-old female baby was brought with a parchment-like membrane covering the whole body, and with fissures (Figure 1). The baby was full term delivered normally at home to a 20-year-old primiparous mother, born of the non-consanguineous marriage. The baby had ectropion, eclabium, and flattened pinna (Figure 2). The baby's birth weight was 2.6 kg, and head circumference of 34 cm. There was no family history of the similar condition.

DISCUSSION

The collodion baby is a clinical entity, referring to newborns who have extra sheets of skin, termed as collodion membrane.[5] Collodion baby is a rare condition needs more care and attention in the neonatal period.[4]

The newborns are encased in glistening, taut, parchment-like membrane.[7] Furthermore, described as dipped in hot wax.[5] The neonates are usually born prematurely.[4] The tight collodion membrane over the face leads to eclabium (eversion of lips), ectropion, and deformed pinna. Collodion membrane can restrict breathing, swallowing, and movement at joints.[3,8] Nasal obstruction can cause difficulty in breathing, which may require probing.[3] Sometimes hairs are absent.[7] The collodion membrane begins to dry early, and cracks in 48 h usually shed off completely in 2 or more weeks. Finally, collodion membrane is replaced by normal appearing skin. The desquamation causes impairment of skin barrier function and fissure formation.[1,2]

It is the early presentation of various congenital ichthyosis.[4] Nearly, 75% of collodion babies progress to autosomal recessive congenital ichthyosis such as lamellar ichthyosis and congenital ichthyosiform erythroderma. About 10% of collodion fetus will have normal skin after the membrane is shed off. They are termed as self-healing collodion babies. Remaining 15% of collodion babies develop other keratinization defects such as Netherton syndrome, Gaucher disease Type 2, ichthyosis vulgaris, trichothiodystrophy, and Sjogren - Larsson syndrome.[9]

Histopathological examination of collodion membrane under light microscope shows decreased thickness of the granular layer with hyperkeratosis of stratum corneum, although it is not diagnostic.[1,7] Self-healing collodion baby occurs due to transglutaminase 1 (TGM1) mutation.[9]

Due to a defect in the skin barrier function, newborns are prone to various complications.[6] Excessive transepidermal

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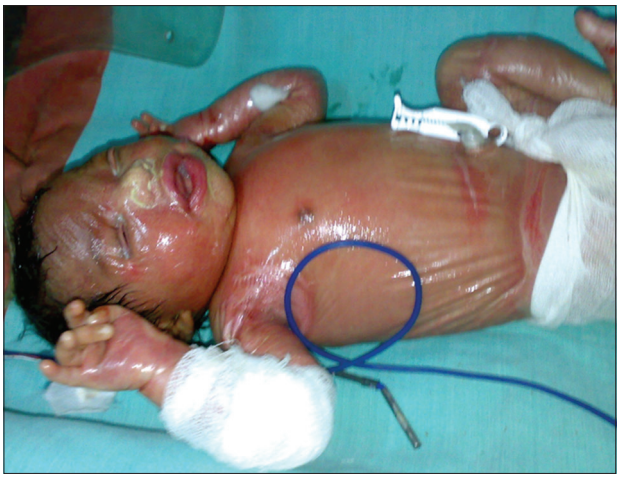

Figure 1: Parchment-like membrane with fissure

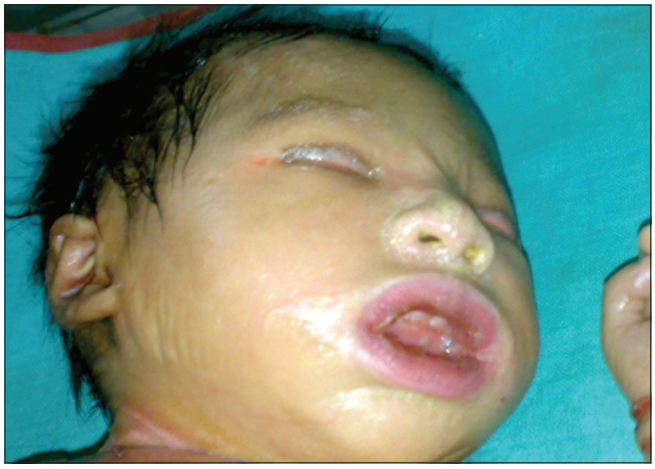

Figure 2: Ectropion, eclabium, and deformed pinna

water loss leads to electrolyte imbalance and hypernatremic dehydration.[4] Collodion baby can develop hypothermia, skin infection, sepsis, pneumonia.[3,4] Ischemia and edema of the extremities can occur due to the constricting band.[5] Neonates with ectropion are at increased risk of exposure keratitis.[10] However it is possible to have no ocular complications with appropriate care.[11]

The management is mainly supportive.[3] The neonates are nursed in humidified incubators,[6] petroleum based emollient, and prophylactic antibiotics are used.[4]

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PEER REVIEW

Nil

CONFLICTS OF INTEREST

Nil

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