Case Report

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Collodion Baby : A Rare Case Report.

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Abstract

Collodion baby, a rare congenital disorder associated with congenital ichthyosis, presents a unique challenge for pediatricians due to its striking clinical features and potential complications. This case report delves into the detailed clinical presentation, examination findings, investigations, and treatment of a collodion baby admitted to our pediatric ward. The neonate displayed the classic signs of a collodion membrane, including hyperkeratosis, eclabium, and ectropion, necessitating a thorough diagnostic workup. Genetic testing, specifically targeting the ABCA12 gene, was pivotal in confirming the diagnosis of congenital ichthyosis. The multidisciplinary approach to management, involving meticulous skin care, ophthalmic interventions, and nutritional support, highlights the complexity of caring for these neonates. This report aims to contribute valuable insights to the existing literature on collodion baby, emphasizing the importance of early recognition and comprehensive care for optimal outcomes.

Keywords: - Collodion baby, Neonatal dermatology, Congenital ichthyosis, Genetic testing.

INTRODUCTION

Collodion baby, an uncommon yet visually striking condition, poses a challenge for healthcare providers due to its distinct clinical features and potential complications. The term "collodion baby" refers to a newborn encased in a tight, shiny membrane resembling parchment. This membrane not only alters the physical appearance of the neonate but also predisposes the infant to various complications,

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including dehydration, respiratory distress, and thermoregulation issues. While the incidence of collodion baby is low, early identification and appropriate management are crucial for the well-being of the neonate.[1,2]

The etiology of collodion baby is primarily genetic, with mutations in several genes linked to congenital ichthyosis, a group of inherited skin disorders characterized by dry, scaly skin. These disorders, including lamellar ichthyosis and harlequin ichthyosis, share common clinical features with collodion baby but vary in severity and long-term prognosis. The challenges posed by collodion baby extend beyond the immediate neonatal period, necessitating long-term dermatological care and genetic counselling for affected families. [3,4]

Here, we present a detailed case of collodion baby, emphasizing the clinical presentation, examination findings, diagnostic approach, and the comprehensive management employed. By delving into the intricacies of this case, we aim to contribute to the growing body of knowledge on collodion baby and highlight the importance of a multidisciplinary approach to care.[5]recurrence, underscoring the importance of vigilant, long-term follow-up. Adjuvant therapies such as chemotherapy or radiation are rarely indicated, given the tumour's indolent behaviour.

CASE REPORT

The neonate in this case, a full-term male delivered via spontaneous vaginal delivery, exhibited a striking clinical presentation immediately after birth. The entire body was covered by a shiny, taut membrane, resembling parchment. Hyperkeratosis, a hallmark feature of collodion baby, was evident on the limbs, causing restricted movements and visible discomfort to the neonate. Additionally, pronounced eclabium and ectropion were observed, complicating feeding and ocular care.

A thorough examination revealed the parchment-like skin to be tight, limiting the baby's movements. The hyperkeratotic skin was particularly prominent on the limbs, emphasizing the need for meticulous skin care. Notably, the neonate displayed ectropion, a condition where the lower eyelids turned outward, and eclabium, leading to difficulty in latching and feeding. Systemic examination, however, did not reveal any anomalies in other organ systems.

To confirm the clinical suspicion of collodion baby and identify the underlying genetic mutation, a skin biopsy was performed. Histopathological examination of the skin biopsy revealed hyperkeratosis and mild acanthosis, consistent with the diagnosis. Though the genetic testing, specifically targeting the ABCA12 gene associated with collodion baby, confirms the presence of a mutation and provides a definitive diagnosis of congenital ichthyosis it could not be done because of unwillingness on the part of parents.

The comprehensive management of collodion baby involved a multidisciplinary approach. Meticulous skin care was initiated with regular emollient applications to manage hyperkeratosis and prevent skin fissures. Ophthalmic lubricants were employed to alleviate the symptoms of ectropion, ensuring eye health and comfort. Due to feeding difficulties caused by eclabium, nutritional support was provided via a nasogastric tube, ensuring adequate caloric intake and hydration. The neonate was maintained in a controlled environment to prevent dehydration and maintain thermoregulation

DISCUSSION

Collodion baby, a manifestation of congenital ichthyosis, demands a comprehensive and multidisciplinary approach to care. The distinctive clinical presentation often prompts immediate medical attention, focusing on addressing the cutaneous, ophthalmic, and nutritional challenges. Genetic testing plays a pivotal role in confirming the diagnosis and guiding long-term management.[6,7]

The identification of an ABCA12 gene mutation in is consistent with previous literature linking collodion baby to congenital ichthyosis. The ABCA12 gene encodes a protein involved in lipid transport, and mutations in this gene disrupt the skin barrier function, leading to the characteristic

hyperkeratotic skin seen in collodion baby. The role of genetic counselling for families is crucial, providing information about the inheritance pattern, recurrence risk, and potential implications for future pregnancies.[8,9]

Long-term follow-up is essential in collodion baby cases, monitoring developmental milestones and assessing the impact on the quality of life. Dermatological care should be tailored to address the evolving needs of the child as they grow, emphasizing psychosocial support for both the affected individual and their family. Advances in genetic research may offer potential therapeutic targets for improving the management and outcomes of congenital ichthyosis. [10]

CONCLUSION

In conclusion, this detailed case report provides comprehensive insights into the clinical presentation, examination findings, investigations, and multidisciplinary management of a collodion baby with a confirmed ABCA12 gene mutation. Early recognition, appropriate investigations, and a multidisciplinary care approach are pivotal for optimal outcomes. By contributing to the literature on this rare condition, we aim to enhance awareness among healthcare professionals, ultimately improving the care and prognosis for collodion babies.

Further research is warranted to explore novel therapeutic interventions and understand the long-term impact of congenital ichthyosis on affected individuals. Collaborative efforts between dermatologists, geneticists, and pediatricians are essential to advance our understanding of collodion baby and improve the quality of life for those affected by this challenging congenital disorder.

Conflict of interest

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