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Case Report

Collodion Membrane with Associated Abnormalities

Authors
Dr Shikha Sharma[1], Dr Mudita Gupta[2], Dr Kuldeep[3], Dr GR Tegta[4]
[1,3]Post Graduate Student, [2]Assistant Professor, [4]Professor and Head
Dept of Dermatology, Venereology and Leprosy, Indira Gandhi Medical College, Shimla, Himachal Pradesh
Corresponding Author
Dr Mudita Gupta
Dept of Dermatology, Venereology and Leprosy, Indira Gandhi Medical College, Shimla, Himachal Pradesh
Email: *muditadrgupta@yahoo.com, Ph no. 9418495747*

ABSTRACT
Collodion baby is a Geno dermatosis in which neonate's whole body is covered with thick shiny translucent waxy skin termed as collodion membrane. We here report a male newborn with collodion membrane with hypospadias and alopecia and inguinal hernia.
Keywords: *Neonate, Collodion Baby, Inguinal hernia.*

INTRODUCTION

The term collodion baby (CB) refers to a clinical entity seen in newborns who are enmeshed by a collodion membrane which is atranslucent, cornified substance like sheet of uniform texture which gives the whole body surface a varnished appearance. It is a rare inherited skin disorder. Majority of collodion baby eventually develop autosomal recessive congenital ichthyosis. It is associated with high morbidity and a mortality rate of approximately 11%.(1)About 270 cases of collodion baby have been reported since 1884 in literature.(2)

CASE REPORT

A day old male newborn, born of non consanguinous marriage by full term normal vaginal delivery after an uneventful pregnancy in a tertiary care centre. The abnormal appearance of the baby's skin was noticed at birth. On examination the baby weighed 1.9 kilogram with parchment like, taut membrane covering the whole body (Fig.1). There was bilateral ectropion, a flattened nosehypospadias (Fig.2), alopecia totalis (Fig.3), natal teeth (Fig.4) was present. There was yellowish discoloration of nails and thickening of nail plate. Systemic examination was unremarkable. Based on these findings, baby was managed as collodion baby in an neonatal ICU. The temperature, hydration and electrolyte status were monitored. The baby was managed with prophylactic antibiotics. Adequate nutrition was provided by the use of expressed breast milk, topical emollients were regularly applied. Investigations of baby revealed - Hb-15.8g/dl, total leucocyte count of 11000/cubic ml, platelet count was 1.5 lacs. Renal and liver function tests were within normal limits. Test for C-reactive

proteins was positive. X ray chest revealed no abnormality. Ultrasound abdomen was within normal limits. Parchment like layer started peeling from second day of birth, exposing the skin underneath. Baby started showing signs of sepsis from third day. Baby's condition deteriorated fast over three day's time. Parents of the baby were counselled about the condition of the baby, possible complications and long term prognosis. Patients attendants left against medical advise and reported 6 weeks later with failure to thrive and an inguinal swelling. Patient was investigated ultrasonography abdomen and KUB and scrotal region were done and there was inguinal hernia on right side with gut loops distending into right scrotal sac, encysted hydrocele of cord and echogenic areas in bilateral kidneys. Patient was referred to paediatric surgery department for the further management.

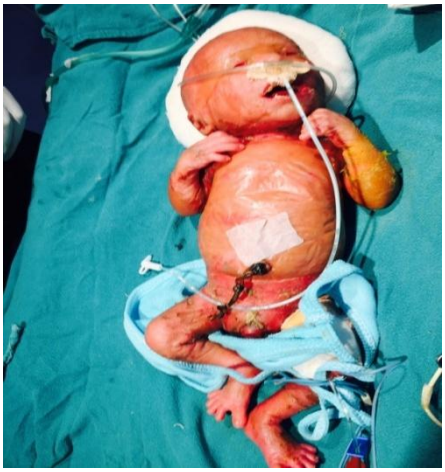

Figure 1 Collodion Membrane

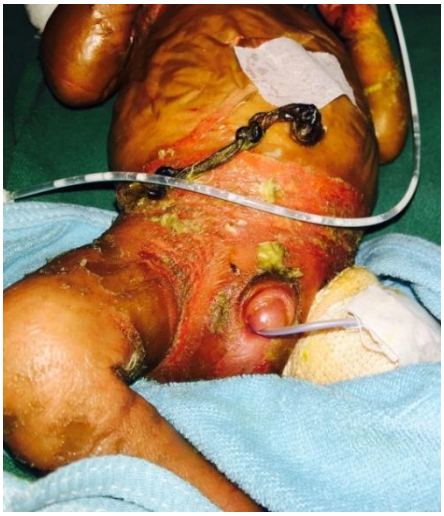

Figure 2 Hypospidias

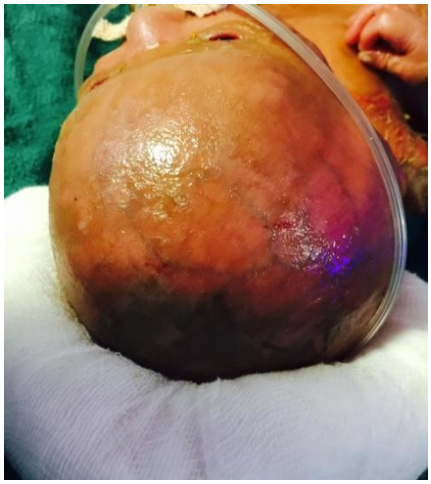

Figure 3 alopecia totalis

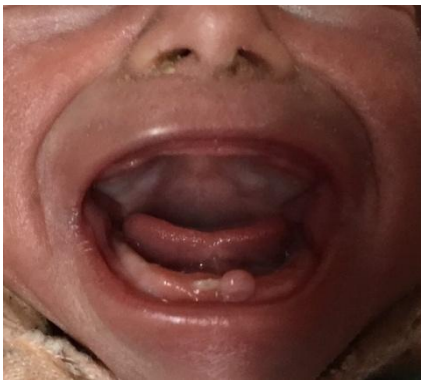

Figure 4 natal teeth

Discussion

The collodion membrane was first described by Pérez in 1880 as "The baby's skin is replaced by a cornified substance of uniform texture, which gives the body a varnished appearance".[3] Collodion baby as a term was first used by Hallopeau in 188.[4] It is a descriptive term, not a specific diagnosis or disorder. Collodion is an extremely rare dermatological condition with an estimated incidence of 1 in 50,000 to 100,000 birth.[5]

The evolution reported in some studies included various types of ichthyosis: congenital Ichthyosiform erythroderma (43%), lamellar ichthyosis (19%), dominant ichthyosis vulgaris (12%) and normal skin (25%).[6] However, surveillance and genetic counseling will continue during follow-up. The natural course of collodion membrane is intriguing. For instance, approximately 75% of collodion baby will go on to develop a type of autosomal recessive congenital ichthyosis, either lamellar ichthyosis or congenital ichthyosiform

erythrodema. Another 10% of cases the baby sheds this layer of skin and has normal skin for the rest of its life.[6]This is known as self-healing collodion baby.

The remaining 15% of cases could stem from variety of diseases involving keratinization disorders. Known causes of collodion baby include ichthyosis vulgaris and trichothiodystrophy.[7] Less well documented causes include Sjögren-Larsson syndrome, Netherton syndrome, Gaucher disease type 2, congenital hypothyroidism, Conradi syndrome, Dorfman-Chanarin syndrome, ketoadipiaciduria, koraxitrachitic syndrome, ichthyosis variegata and palmoplantar keratoderma with anogenital leukokeratosis.[7] The historic incidence of hypospadias is 1 in 300 live births.[8]The incidence of inguinal hernia in full term newborn infants is 3.5-5% while in pretermand low birth weight infants it is 9-11%.Congenital inguinal hernia is caused by persistence of patency of processus vaginalis. A hydrocele is an accumulation of fluid in the processus vaginalis, 1-2% of neonates have hydrocele.[10] Incidence of natal and neonatal teeth range from 1:2000 to 1:3500 exact etiology is not known .Genetic and endocrinal disturbances (pituitary, thyroid, gonads) may have an etiological role. Certain syndromes have also been associated with natal teeth.[11]

Our patient had collodion membrane, failure to thrive, hypospadias, natal teeth, alopecia to talis, inguinal hernia and hydrocele. All these abnormalities simultaneously presenting in a new born have never been reported so we have not been able to fit it in a single specific syndromic diagnosis.

Sources of support: nil

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