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Plastic Baby (Collodion) Gives Birth to a Plastic Baby

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Abstract: ***The collodion baby is a descriptive term for the infant who is born encased in a tight shiny membrane that resembles plastic wrap. The collodion baby is not a disease entity but is the first expression of some forms of ichthyosis. Most cases are due to autosomal recessively inherited ichthyosiform disease. Mutations in the genes TGM1, 2,3 ABCA12(ARCI) are associated with collodion phenotype at birth. The severe classic lamellar ichthyosis phenotype is characterised by large brown thick scales with plate-like appearance over the entire body surface combined with eyelid ectropion. Smaller and lighter scales characterised the milder phenotype, namely non-bullous congenital ichthyosiform erythroderma, with generalized skin reddening.***

Keywords: ARCI Autosomal recessive congenital ichthyosis, Erythroderma reddening of the skin. Ectropion eyelid is turned outward away from the eyeball

1. Introduction

The collodion baby is a descriptive term for the infant who is born encased in a tight shiny membrane that resembles plastic wrap. The collodion baby is not a disease entity but is the first expression of some forms of ichthyosis. Most cases are due to autosomal recessively inherited ichthyosiform disease. Mutations in the genes TGM1, 2, 3 ABC

A12(ARCI) are associated with collodion phenotype at birth. The severe classic lamellar ichthyosis phenotype is characterised by large brown thick scales with plate-like appearance over the entire body surface combined with eyelid ectropion. Smaller and lighter scales characterise the milder phenotype, namely non-bullous congenital ichthyosiform erythroderma, with generalised skin reddening. Harlequin ichthyosis represents the most severe end of the phenotypic 4 spectrum of autosomal recessive ichthyosis. Other rare causes of collodion babies include Sjogren Larsson syndrome, Gaucher's disease type 2, Hay-Wells disease. The mother of the baby hails from the Rajasansi area of Amritsar district in Punjab, which is located some 240 km from here. Doctors of Guru Nanak Dev Medical College and Hospital in Amritsar had examined the baby. **Incidence**: This is a very rare disease and is found in one among every six lakh babies in India.

2. Signs & Symptoms

The collodion membrane cracks and peels over the course of several weeks. The tightness of the membrane may cause the eyelids to turn out revealing the pink inner lid; a condition called ectropion.Congenital ichthyosiform erythroderma (CIE) and ARCI-lamellar ichthyosis are the most commonly seen forms of ichthyosis presenting with a collodion membrane. Eclabium, the turning out of the lips due to the tightness of the membrane, may accompany the ectropion, and may cause difficulties with nursing. When the membrane is completely shed the infant may display one of several ichthyosis skin types. However, the membrane may also be present in Netherton syndrome and other very rare forms of ichthyosis, and is always present with harlequin ichthyosis. A small percentage of infants shed the membrane and never display any other skin involvement; a phenomenon called “self-healing collodion baby.

3. Complications

Cracking and peeling of the membrane increases the risk of infection from microorganisms. These infants are also at risk for fluid loss, dehydration, electrolyte imbalance, body temperature instability, and pneumonia, hypothermia.

4. Diagnose

Genetic testing, which would ideally be performed first on the person with ichthyosis, is often helpful in determining a person's, and their relative's, chances to have a baby with ichthyosis. Genetic testing may be recommended if the inheritance pattern is unclear or if you or a family member is interested in reproductive options such as genetic diagnosis before implantation or prenatal diagnosis. Doctors frequently use genetic testing to help define which ichthyosis a person actually has. This may help them to treat and manage the patient. Another reason to have a genetic test is if you or a family member wants to have children. Genetic testing, which would ideally be performed first on the person with ichthyosis, is often helpful in determining a person's, and their relatives, chances to have a baby with ichthyosis. Genetic testing may be recommended if the inheritance pattern is unclear or if you or a family member is interested in reproductive options such as genetic diagnosis before implantation or prenatal diagnosis.

Results of genetic tests, even when they identify a specific mutation, can rarely tell how mild or how severe a condition will be in any particular individual. There may be a general presentation in a family or consistent findings for a particular diagnosis, but it's important to know that every individual is different. The results of a genetic test may be "negative," meaning no mutation was identified. This may help the doctor exclude certain diagnoses, although sometimes it can be unsatisfying to the patient. "Inconclusive" results occur occasionally, and this reflects the limitation in our knowledge and techniques for doing the test.

5. Treatment

Collodion babies should be monitored closely placed in a high humidity chamber for other complications. A high humidity environment will allow slow, gradual sloughing off of the membrane. The membrane will come off on its own and should not be peeled off. Emollient skin cream (EMODERM) was applied. Baby was discharged after one week after the parents were accustomed to the special skin care of the baby. Application of mild petroleum-based moisturizers may help the infant feel more comfortable while the membrane is peeling off. Follow up after one week the baby had smooth glistening skin with fissures around the left axilla with ectropion and fish like mouth local antibiotics (NADIBACT) to prevent infection.

A consultation with a pediatric dermatologist will be necessary to determine which form of ichthyosis is present, if any. (Contact FIRST for a referral to a dermatologist familiar with ichthyosis.)

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