

CASE REPORT

Collodion baby treated with isotretinoin: A case report

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Abstract

. We present a male baby who was born with a yellowish membrane (Collodion membrane) covering his entire body. He was treated with oral isotretinoin on 5th day of life. The treatment resulted in a satisfactory improvement in the patient's skin condition. There were no side effects reported and the drug was well tolerated. Our patient with congenital ichthyosis was successfully treated with oral Isotretinoin

Introduction

Ichthyosis is a group of diseases of keratinization, characterized clinically by dry, scaly skin. Ichthyosis is caused by abnormal epidermal differentiation or metabolism. There are two forms of ichthyosis, congenital and acquired (1). Autosomal recessive congenital ichthyosis is classified into lamellar ichthyosis and congenital ichthyosiform erythroderma, also includes harlequin ichthyosis, self-healing collodion baby ichthyosis, acral self-healing collodion baby, and bathing suit ichthyosis (2). The collodion membrane sheds after 10–14 days, revealing generalized redness and scaling (3). Oral retinoids are a safe and effective systemic therapy for the management of congenital ichthyosis (4). The lowest dose of acitretin or isotretinoin (0.5-1 mg/kg/ day) is indicated to maintain therapeutic effect and reducing the mucocutaneous and systemic adverse effects to manageable level (4). Long-term use has maintained remission of skin manifestations and allowed patients to survive beyond the neonatal period when untreated mortality is very high (5). However, oral retinoid therapy requires close monitoring and management of potential side effects.

Case presentation

A newborn with an unusual physical appearance was brought to our attention on its first post-natal day.. He was the third child of a consanguineous marriage, and a

normal delivery. , His siblings were healthy. On physical examination, the baby was encased in a collodion membrane (Figure 1). He had ectropion, eclabium (Figure 2), and restricted limb movements, at birth. Laboratory data were within the normal range; complete blood count, liver function tests, renal function tests, serum electrolytes, blood glucose, lipid profile and thyroid function tests. Abdominal ultrasound and echocardiography showed normal findings. His mother was putting her milk in a bottle to feed him. His skin was protected by the liberal use of moisturizers, and topical antibiotics. Special care was given to eyes and other mucosa. Parenteral antibiotics were given to prevent secondary infections. Fluid correction was done according to daily weight and electrolyte requirement. After obtaining consent from the parents, we started giving him isotretinoin (1 mg/kg/ day) on the fifth day of his birth. Isotretinoin capsule of 20 mg dose were cut open and the fluid content dissolved in 10 ml of olive oil (20mg isotretinoin capsule compounded in 10mL olive oil for final concentration of 2mg/mL). Our treatment schedule was set for 12 months, as stated in the literature, unless there were any complications. After two weeks of treatment, clinical improvement was observed and the child became near normal, with amelioration of ectropion and eclabium (Figure 3). On 5th month of isotretinoin treatment, significant improvement in skin dryness was noted (Figure 4).



Figure 1: Baby encased in a collodion membrane at birth



Figure 2. Ectropion and eclabim observed after five hours after birth



Figure 3. After two weeks of taking isotretinoin, near looking normal baby



Figure 4. Significant improvement in skin dryness at the end of 5 months of treatment with isotretinoin

Discussion

The collodion baby is described as congenital condition characterized by presence of parchment- like covering over the entire body that peels and flakes off within 10-14 days (3). As in our case, a yellowish membrane (collodion membrane) covers the entire body at birth and begins to peel off within 5-10 days. There is usually no mucous membrane involvement and no erythroderma. Ectropion and eclabium, the most common diagnostic features in almost all cases, appear as a result of thicker skin structure and pulling of the soft tissues around the lips and conjunctivae (6). Similar to our case, the mucous membrane and erythroderma were not affected, however ectropion and eclabium were observed which was based on the clinical diagnosis.

In most cases, collodion baby precedes the development of another type of ichthyosis, the most common of which is lamellar ichthyosis and non-bullous ichthyosiform erythroderma (6). In our case, collodion baby-lamellar ichthyosis type, was diagnosed. the patient was placed in a humidified incubator and receiving appropriate treatment as well as a prophylactic course of antibiotics as reported previously (7), and fortunately the hospital course was relatively uncomplicated.

Survival rates for newborns depend on care and receipt of prescribed oral retinoid therapy. Several retinoids are used to treat Harlequin ichthyosis, including isotretinoin, etretinate, and acitretin, with acitretin being the most commonly used retinoid due to its moderate half-life and better safety profile (8).

In our case, we started giving isotretinoin (1 mg/kg/day) instead of the unavailable acitretin. The skin symptoms improved significantly during the second week of treatment, and the patient's skin became close to normal. Furthermore, the ectropion and eclabium improved. The patient was discharged from the hospital on oral isotretinoin at a dosage of 1 mg/kg/day since treatment with systemic retinoic acid (0.5–1 mg/kg/day) was found to improve severe ichthyosis significantly (9).

At outpatient follow-up, liver function tests and lipid profile were normal. Oral isotretinoin was continued till the age of one year. The patient tolerated the drug well and no side effects were observed. Collodion babies treated with oral retinoic acid showed a substantial improvement in the skin and ocular manifestations, and had no side effects associated with the treatment (9). However, it has been suggested that oral retinoic acid treatment should be withdrawn when liver function tests reveal

abnormalities, then the treatment restarted again with continues monitoring of the patients (10).

During administration of oral isotretinoin in our patient, a significant improvement in the skin and eye manifestations was observed as well as a great change in the life of this child. Therefore we recommend early use of retinoids in the case of a collodion baby with regular monitoring.

Conclusion: Early treatment with systemic retinoids seems to improve the quality of life and improve the survival rates of collodion babies..

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