VIA MEDICA

CASE REPORT

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Infantile seborrheic dermatitis differential diagnosis based on case report

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ABSTRACT

Infantile seborrheic dermatitis often occurs during the first three months of life and most frequently presents as erythema and greasy scales located especially on the scalp (commonly called "cradle cap"). Usually, it is a mild, self-limiting condition. The severe, erythrodermic clinical appearance is rare and often demands differential diagnosis with other more serious skin conditions. We report a case of severe seborrheic dermatitis in an infant. A 5-weeks male infant presented with erythrodermic scaling lesions and exfoliation of the outermost layer of the epidermis, which had appeared after birth. Greasy scales were observed on the scalp, eyelids, and face accompanied by inflammation of the eyelids. Moreover, erythematous, well-demarcated lesions were noticed in the neck folds, behind the ears, in the axillary region, and diaper area. Considering the severe clinical appearance, additional tests such as skin biopsy and genetic analysis were performed to exclude other possible causes such as atopic dermatitis, Langerhans histiocytosis, congenital ichthyosis, and psoriasis. Based on clinical presentation and additional test results, infantile seborrheic dermatitis seemed to be the most probable diagnosis. The treatment including 1% tannic acid, 0.5% erythromycin eye cream, clotrimazole cream, hydrocortisone cream, and emollients was started in the hospital with a good response. After a month of therapy, the patient was re-admitted for the follow-up, with further improvement of the skin condition. It is essential to remember that the dermatoses that we should take into consideration during the differential diagnosis of severe infantile seborrheic dermatitis are atopic dermatitis, Langerhans histiocytosis, congenital ichthyosis, and psoriasis.

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Keywords: infantile seborrheic dermatitis, atopic dermatitis, Langerhans histiocytosis, congenital ichthyosis, psoriasis

CASE REPORT

A 5-week-old male infant suspected of congenital ichthyosis was admitted to the dermatological department with erythrodermic scaling lesions and exfoliation of the outermost layer of the epidermis (Fig. 1A, 1B). The mentioned lesions have been observed since birth. The child was born through natural childbirth in the 37th week of gestation with a birth weight of 3180 g and an APGAR score of 10. No medical history of particular significance was reported. During clinical examination at the admission to the hospital apart from mentioned skin changes, greasy scales were observed on the scalp, eyelids, and face accompanied by inflammation of the eyelids (Fig. 1B). Moreover, erythematous, well-demarcated lesions were noticed in the neck folds, behind the ears, in the axillary region and diaper area (Fig. 1A, 1B, 2). The roughness of the skin was widely marked. In the blood test results, there weren't any significant deviations. Only the CRP level was increased to 18.43 mg/L. Moreover, the child has mild macrocytic anemia. In the hospital, 1% tannic acid, 0.5% erythromycin eye cream, clotrimazole cream, hydrocortisone cream, and emollients were used to ease the symptoms. Although the patient's condition might seem quite severe, the most important part of the treatment was the proper moisturizing of the skin, which significantly reduced the roughness and dryness of the skin. The skin biopsy was taken to eliminate other potential diagnoses such as atopic dermatitis, Langerhans histiocytosis, and psoriasis, but no significant deviations were noticed in the skin sample. The genetic tests, which excluded congenital ichthyosis, were also performed. For further home treatment 0.5% erythromycin eye cream, clotrimazole cream, skin care products for "cradle cap" and emollients were prescribed. After two months the boy was readmitted to the dermatological ward for the follow-up, which showed gradual partial improvement of skin condition (Fig. 3).

DISCUSSION

Infantile seborrheic dermatitis (ISD) is a common disorder in infants [1]. The overall prevalence is hard to establish because plenty of mild cases might not require any

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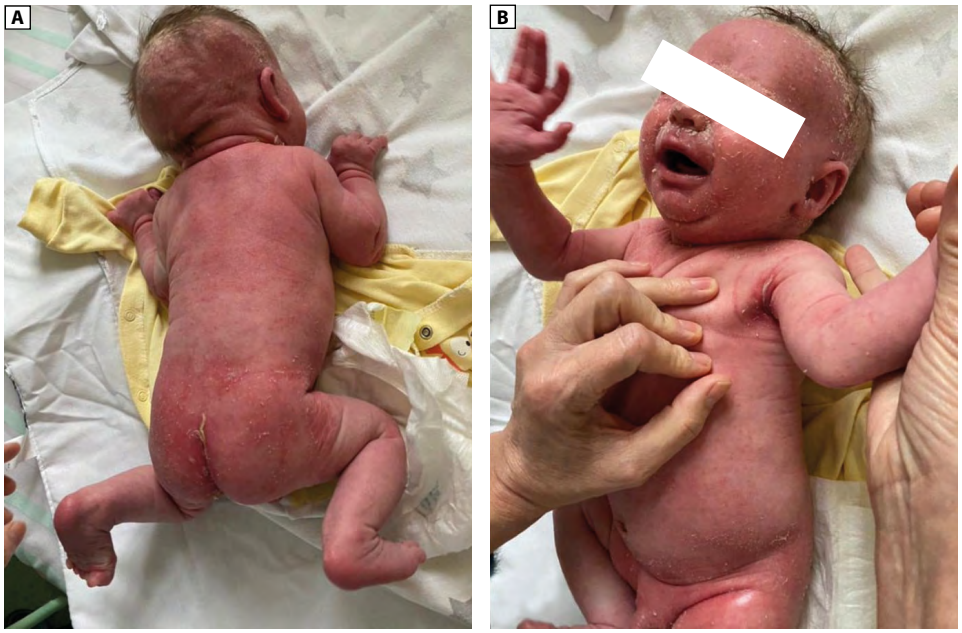

Figure 1. Erythrodermic scaling lesions and exfoliation of the outermost layer of the epidermis (**A**) and greasy scales on the scalp, eyelids, and face accompanied by inflammation of the eyelids at the admission (**B**)

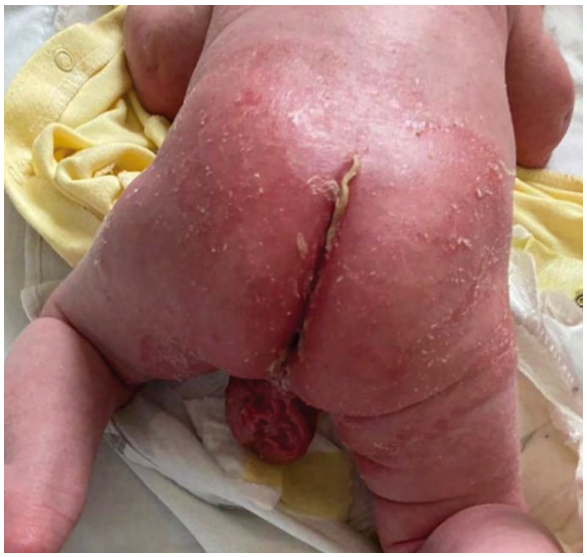

Figure 2. Skin lesions in the diaper area at the admission

medical attention. According to Foley et al. [2], the prevalence of seborrheic dermatitis in infants is 10% with no sex predominance and the peak around the third month of life and further steadily decreases by the age of one. On the other hand, it is essential to remember that the erythrodermic clinical presentation of ISD is rare and demands thorough insight because it might be easily mistaken for more serious disorders. The dermatoses that we should always take into consideration during differential diagnosis are atopic dermatitis, Langerhans histiocytosis, congenital ichthyosis, and psoriasis. During the diagnostic process, extra tests such as skin biopsy or genetic analysis are often needed to make a final diagnosis.

There is a significant overlap between the clinical features of ISD and atopic dermatitis (AD), especially in infancy. It can be hard to differentiate those two conditions, particularly during the initial disease stages because there is

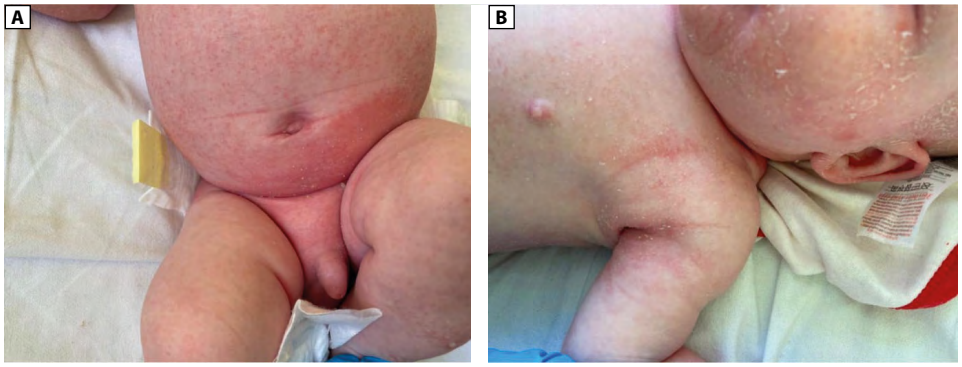

Figure 3A, B. Clinical image of the skin during the follow-up

a lack of a characteristic pathognomonic sign or laboratory test, so the diagnosis is based only on clinical features [3]. Sparing of the napkin area and axilla is a common presentation of AD. Moreover, erythroderma is a rare manifestation of this disease in the neonatal period [4]. It is estimated that children with ISD are more likely to develop AD features in the future [1, 3]. Additionally, children diagnosed with ISD often have a positive family history of atopy [3].

Cutaneous manifestation of Langerhans histiocytosis is the most common in children under 2 years of age. The morphology of lesions can mimic seborrheic dermatitis and is often misdiagnosed with this condition. However, the isolated cutaneous disease is present in only 2% of all cases and more commonly it is associated with systemic involvement [5]. Due to that fact, regular follow-up and additional diagnostic tests should be performed to exclude this potential diagnosis.

Congenital ichthyoses are a large and varied group of in herited disorders that presents as dry, rough, scaly skin [6]. A congenital onset of erythroderma might be indicative of ichthyosis. Clinical presentation depends on the subtype and might vary from the just observable scaling to the thick and massive scales. Differential diagnosis with generalized atopic dermatitis is often needed [4].

It is reported that one-third of children with plaque psoriasis and about half of children suffering from pustular psoriasis develop primary skin lesions during the first year of life [7]. Napkin psoriasis (anogenital psoriasis) is the most common type of psoriasis in infants. The clinical appearance includes well-demarcated dermatitis within the diaper area with a glazed or dry erythema without typical scales [8]. However, dissemination of psoriasis beyond the anogenital area is frequent, so it is important to check other predilection sites such as the scalp, umbilicus, external auditory canals, periauricular region, and perianal fold [8, 9]. It is important to remember that generalized erythrodermic distribution of lesions may also appear, so skin biopsy might be needed to confirm the diagnosis. On the other hand, congenital psoriasis is a quite rare disorder, which hasn't been well characterized yet [10, 11]. The symptoms appear at birth and clinical features vary from those of infantile or childhood psoriasis. Most commonly psoriasis lesions are located on the scalp, extremities, and trunk and less likely present in the diaper area [10]. The generalized disease distribution might also be found and can be similar in appearance to non-bullous ichthyosiform erythroderma [10, 11]. The other distinguishing features between these disorders are positive family history, areas of unaffected skin in psoriasis, and ectropion in ichthyoses [6, 11].

It is crucial to remember that the erythrodermic clinical presentation of ISD is rare and demands differential diagnosis with other dermatoses that might have a similar clinical appearance. Atopic dermatitis, Langerhans histiocytosis, congenital ichthyosis, and psoriasis are the most frequent ones. During the diagnostic process, some extra tests such as skin biopsy or genetic analysis are often needed to make a final diagnosis.

Conflict of interest

All authors declare that they have no conflicts of interest.

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