TRANSIENT BULLOUS DERMOLYSIS OF THE NEWBORN.

Patil M¹, Pratinidhi SA¹

1. SKNMC and GH, Pune 41, India.

Correspondence
Dr Maya Patil. Department of Paediatrics, SKNMC and GH, Pune 41, India
Email: mayashilpa5@gmail.com


Sir, we are reporting case of a new born who developed spontaneous skin blisters on day two of life. These were subsequently diagnosed as transient bullous dermolysis of newborn. This is a rare variant of bullous disorders in children. They were first reported in 1985. Both autosomal dominant and recessive forms are known. They present characteristically with acral and generalised blistering¹.

A 20 year old second gravida mother delivered a male child by lower segment caesarean section. This baby was full term appropriate for gestation age. This baby developed skin blisters on second day of life and was immediately shifted to Neonatal Intensive Care Unit for observation. The bullae were present on extremities, more on hands. The largest was 3 x 4 cms on left foot (Figure 1). The bullae were translucent, tense, fluid filled which revealed clear fluid on puncturing. The bulla on left foot spontaneously ruptured and was followed by an ulcer after five days. The baby was otherwise well. He passed urine and motion in 24 hours and was feeding normally. He was normothermic, pink baby with normal vital parameters. Chest, cardiovascular, abdominal and central nervous system were normal. His hair and nails were unaffected. No significant family history was obtained. This baby was called to high risk neonatal clinic four weeks after discharge. On examination at follow up the bullae and ulcer had healed without leaving any scars.

Figure 1. Blisters on extremities in a newborn baby with transient bullous dermolysis.
Transient bullous dermolysis of the newborn
His Haemoglobin was 17.6 gm/dl, his White Blood Count was 4200 /cumm, with polymorphs 65%, lymphocytes 31%, eosinophils 3% and monocytes of 1%. The blister fluid was sent for gram staining and culture, both did not reveal any organism. The C Reactive protein was negative. The blood culture was also sterile. The skin biopsy was done which showed presence of subepidermal bullae with no inflammation (Figure 2).

Figure 2. Bullous lesion showing a bulla forming at the sub-epidermal junction with no inflammation (H & E staining, Magnification x 100).

Transient bullous demolysis of newborn is a rare entity. The dominant form is thought to be a form of Dominant Dystrophic Epidermolysis Bullosa. This disorder generally heals with scars. In our patient we found that the blisters healed without leaving residual stigmata.

In observations of Ken Hashimoto, he also mentions about healing of Transient bullous demolysis blisters without scars. In his article he mentions that, the bullae healed rapidly, leaving hypopigmentation but no scars or milia. Occasional new lesions continued to appear for four months but not after. Re-examination 12 months later showed a normal healthy infant with only residual hypopigmentation in some of the previously involved areas. In transient bullous demolysis of newborn, separation is below the basal lamina and degeneration of collagen was seen. There is rapid healing by 4 months of age with sparing of nails. There is no scarring. Histologic analysis has localised the abnormality to the precursors of the anchoring fibrils. The cause has been shown in one family to be
transverse mutation in the COL7A1 gene encoding type seven collagen. Over 100 COL7A1 gene defects have been disclosed in recessive and dominant dystrophic epidermolysis bullosa.(DEB)\textsuperscript{4}. The genetic studies have shown mutations in a gene that codes for Type seven collagen in some cases\textsuperscript{1}.

This condition is unique in the subsets of Epidermolysis Bullosa. This is because it resolves spontaneously in infancy. Transient bullous demolysis of newborn (TBDN) has been grouped separately from dystrophic epidermolysis bullosa based on the pronounced morphologic features and the self-limiting course of the disorder however, it remains unclear whether it represents a distinct clinical entity with a single etiology\textsuperscript{5}. Hashimoto et al considered six criteria for this entity. 1) Vesiculo bullous lesions present at birth. 2) Spontaneous recovery. 3) No dystrophic scars. 4) Sub epidermal blisters. 5) Collagenolysis. 6) Dilatation of rough endoplasmic reticulum with stellate bodies of keratinocytes in their vacuoles. A study by Fassihi H, describes Transient bullous dermolysis of newborn in three generations\textsuperscript{6}.

The mechanism for the transient nature of reduced amounts of type seven collagen remains to be defined and further studies to ascertain the cause and nature of this disorder. The clinicians dealing with neonates should be aware of this benign condition. This will save on unnecessary use of medications on the baby as this condition is self resolving.

REFERENCES