

IMAGES IN CLINICAL PRACTICE

SKIN RASH FOLLOWING THERAPEUTIC HYPOTHERMIA IN A NEWBORN INFANT

Aysen Orman¹, Erdal Taskin¹, Nilay Hakan², Atika Çağlar¹, Mustafa Aydın¹.

¹Department of Pediatrics-Neonatology, Firat University School of Medicine, Elazığ, Turkey

²Department of Pediatrics-Neonatology, Sitki Kocman University School of Medicine, Mugla, Turkey

A 20-year-old Caucasian woman delivered a male baby at 38th week of gestation by traumatic vaginal delivery. Apgar score was 4 at 5th minute. There was metabolic acidosis (pH 6.8, base excess 20 mmol/L) in umbilical-cord blood gas analysis. There was no atopy history in the family. Physical examination of the baby showed encephalopathy, hypotonia and prolonged capillary refill time. His septic workup was negative. Amplitude-integrated electroencephalography revealed severe continuous low voltage. Therapeutic hypothermia (TH) was initiated within the first six postnatal hours after the patient was diagnosed as grade III hypoxic-ischemic encephalopathy. The child developed edematous erythematous plaques shortly after initiating therapeutic hypothermia on the face, neck, thorax, back and gluteal regions (Figure 1) which were fading with pressure. At that time, his body temperature was found at 34°C. These urticarial lesions completely resolved with a single dose of pheniramine hydrogen maleate (1 mg/kg intravenous). TH was continued for 72 hours. The patient was discharged on 14th postnatal day with the short-term favorable clinical outcome.

Figure 1. Erythematous plaques on the patient's face and trunk.



What is the cause of the skin rash?

Cold urticaria (CU). It is a distinct clinical entity characterized by redness, itching, wheal and edematous lesions on the cold-exposed skin.¹ It is very rare in childhood. But, to the best of our knowledge, CU has not been reported in neonates till to date. CU is one form

ARTICLE HISTORY

Received 18 May 2019

Accepted 5 July 2019

KEYWORDS

Cold urticaria, HIE

of urticaria that may be associated with other forms of physical urticaria.² As seen in our patient, symptoms usually occur within a few minutes with cold exposure. However, symptoms of delayed-type CU may occur 24-72 hours later.³ Cold-induced systemic involvement can progress to severe anaphylaxis with gastrointestinal system, respiratory system and cardiovascular system involvement.³ The diagnosis is based on the history and ice cube test. Patients with a negative ice cube test may have also represented systemic CU (atypical acquired CU) induced by general body cooling as occurred in our patient. H1-antihistamines can be used for the treatment of CU; however, patients who are unresponsive to this treatment may require further management.^{4,5} Although there were widespread urticarial lesions, systemic involvement was not seen in our patient and the urticaria resolved with H1-antihistamine despite continuing TH.

Compliance with Ethical Standards

Funding: None

Conflict of Interest: None

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CONTACT Mustafa AYDIN

Email: dr1mustafa@hotmail.com

Address for Correspondence: Mustafa AYDIN,
Department of Pediatrics-Neonatology, Firat
University School of Medicine, 23119, Elazığ / Turkey.

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