British Association of Perinatal Medicine

Spotlight on Safety Story

Spotlight on Safety Story: Term baby sustained a burn to the foot during a capillary blood test

Situation	Term baby approximately 11 hours old noted to have a blister developing on his heel during a 'heel prick' procedure to obtain a capillary blood sample.

Background	• ST1 GP assigned to complete the capillary blood sample via a heel prick.
	  ○ Term baby with mother in observation bay on Delivery suite.
	  ○ History of GDM.
	• Approx. 11 hrs of age requiring a repeat blood gas to check a lactate and blood glucose levels
	• The first attempt to obtain the sample was unsuccessful due to air entering the capillary tube which had not been noticed due to the room being dark.
	• On the second attempt the doctor used a blue surgical glove filled with a mixture of cold and boiling water to warm the foot prior to completing the blood test.
	• Checked the temperature of the glove against his own skin on his hand to ensure that the temperature was suitable to use. Following this check the glove was placed against the baby's foot three times for approximately 15-20 seconds whilst attempting to warm the heel.
	• Whilst attempting the second heel prick sample, noticed that the skin on the baby's foot felt a little different; on closer examination he noticed that the skin looked red and that a blister had formed.
	• Escalated to the plastics surgery team

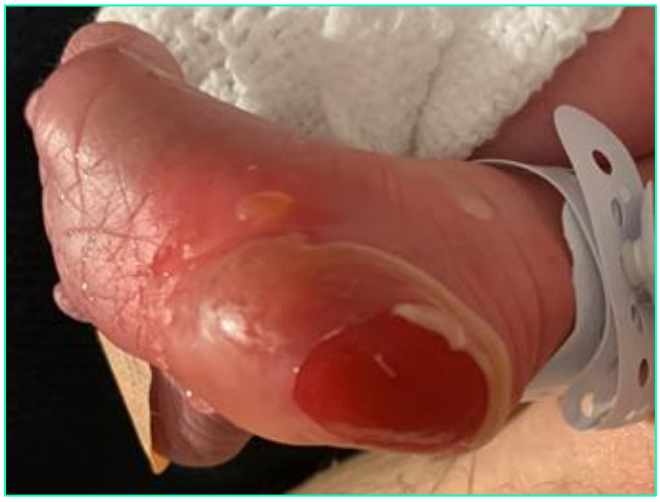
Assessment	• The injury was graded as a 1% mixed depth burn to the right heel • The injury was managed conservatively. Debrided and dressed with bactigras. • Baby's hospital discharge was delayed as baby required daily dressings. • Baby had regular dressing changes and reviews over the next 4 weeks before being discharged • Baby reviewed in scar clinic 4 months after the incident and no signs of hypertrophic scarring seen, skin remains slightly pinkish but no evidence of thickened or lumpy skin. • Both parents were extremely distressed following the incident and received psychological support.
Recommendation	• It was identified that there are variations in practice and guidance with customary practices being used that are not evidence based. This resulted in a practice that had been perceived as being a safe and acceptable procedure causing unnecessary injury to a baby which has had a huge psychological impact on the family. • As soon as the incident was raised, it was escalated, and immediate actions put in place advising all staff that it is not safe practice to use a water filled glove as a warming mechanism.

	• A local SOP was implemented outlining national guidance on newborn blood spot sampling which was shared within the local neonatal operational delivery network • All future training of capillary blood sampling in babies should follow nationally recognised and evidence-based guidelines

References:

1. 9789241599221_eng.pdf (who.int)
2. www.ncbi.nlm.nih.gov/pmc/articles/PMC10686271
3. Guidelines for newborn blood spot sampling, March 2016 (publishing.service.gov.uk)

Initial injury



Injury after approximately 6 weeks