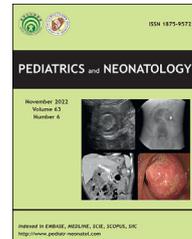


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Images

Skin color change due to peripherally inserted central catheter leakage

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A girl weighing 564 g at 27 weeks of gestation was born by cesarean section due to fetal dysfunction. After birth, a peripherally inserted central catheter (PICC; Argyle™ PI Catheter Kit II 27G, Double Lumen, Covidien Japan, Tokyo, Japan) was indwelled from the right radial vein.

A round white skin lesion with a 5-mm diameter was observed on the patient's right shoulder 30 h postnatally (Fig. 1A, arrow). No nodule was seen at the lesion site, and radiography revealed that it matched the PICC tip (Fig. 1B,

arrowhead). At this time, a 14% glucose solution containing 1 g/kg/day of amino acids and 3 μg/kg/min of dopamine (concentration of 0.3 mg/ml) was administered via the PICC. Extravasascular leakage of fluid was suspected and the PICC was reinserted. After the PICC removal from the right arm, the white-colored skin changes disappeared within a few minutes (Fig. 1C) without skin sequela.

PICCs are widely used as a route for fluid infusion in neonates. Extravasascular leakage associated with PICCs

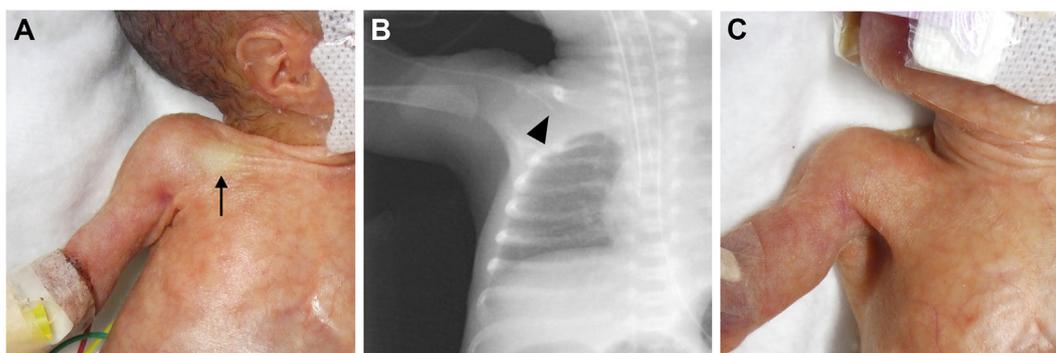


Figure 1 Figure A. Round white skin lesion with a 5-mm diameter seen on the patient's right shoulder (arrow). Figure B. Chest radiography showing the tip of the PICC that matched the skin lesion (arrowhead). Figure C. White-colored skin changes disappeared a few minutes after the PICC removal.

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incidence is reported in approximately 1.4%.¹ The presence of a PICC tip in the midclavicular region, such as in our patient, is one of the risk factors for extravascular leakage.² Dopamine extravasation causes vasoconstriction and ischemia even at low doses;³ hence, we hypothesized that our patient may have developed a white ischemic change due to skin-capillary constriction from dopamine extravasation that constricts the peripheral blood vessels. We believe that prompt PICC leakage detection was an important factor in preventing skin necrosis in the patient. Therefore, frequently confirming that the tip of the PICC is appropriately in a central position in the body and the absence of skin abnormalities is important. With suspected extravascular leakage, PICC replacement should be promptly considered (see Fig. 1).

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Informed consent

Written informed consent was obtained from the patient's parents for publication of this report and images.

Declaration of competing interest

All authors declare no conflicts of interest.

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