PORTUGUESE JOURNAL OF PEDIATRICS

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An unusual manifestation of severe edema in nephrotic syndrome

Uma manifestação rara de edema grave na síndrome nefrótica

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Keypoints

What is known
- Ascites is a common finding in nephrotic syndrome.
- Adherence to treatment is important to prevent nephrotic syndrome complications.

What is added
- Transudation of ascitic fluid through the abdominal wall is a rare complication of nephrotic syndrome.
- The treatment of transudation of ascitic fluid and skin lesions is challenging and improvement may take several weeks.

Ascites is a common finding in nephrotic syndrome due to transudation from the intravascular compartment to the peritoneal space[1]. We report on a rare complication in a child with severe ascites.

A 4-year-old girl with frequent relapsing nephrotic syndrome presented at the emergency department with abdominal pain. She was being treated with alternate day prednisolone 40mg/m^2, with poor adherence to this medication.

The patient had anasarca, normal blood pressure, tachycardia, and poor peripheral perfusion. Hypoalbuminemia (< 0.6 g/dL), nephrotic range proteinuria (urine protein/creatinine ratio 2.31 g/g) and dyslipidemia were identified. The inflammatory markers were normal. The patient was admitted to the hospital and treated with prednisolone 60mg/m^2/day and, also, albumin, due to the hypovolemic crisis.

In the following days the ascites increased and the abdominal pain intensified. The inflammatory markers raised. On the ultrasound, debris were found in the ascitic fluid, and a presumptive diagnosis of spontaneous bacterial peritonitis was made. Ceftriaxone was started. The ascites intensified, causing abdominal wall distension with skin disruption, and abdominal stria appeared. Transudation of ascitic fluid through the abdominal wall occurred (Fig. 1). Topical fusidic acid, zinc oxide ointment and povidone iodine dressings on the abdominal wall skin were started. After two weeks, the edema decreased and there was progressive skin healing (Fig. 2).

After four weeks of intravenous prednisolone, nephrotic range proteinuria persisted. A kidney biopsy was performed and focal segmental glomerulosclerosis was identified. Tacrolimus and weaning of prednisolone were started. A next-generation sequencing study for genetic causes of nephrotic syndrome was done and

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Received: 02-12-2022
Accepted: 09-10-2023
https://pjp.spp.pt

Available online: 07-02-2024
Port J Pediatr. 2024;55(1):64-65
DOI: 10.24875/PJP.M23000431

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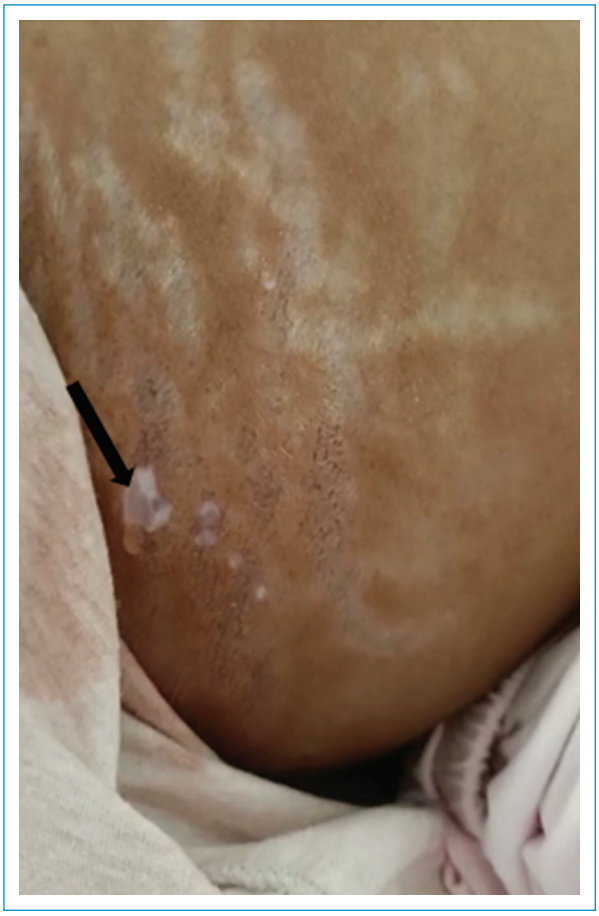

Figure 1. Transudation of fluid through the abdominal wall.

Figure 2. Progressive healing of the skin of the abdominal wall.

no mutations were found. There were no relapses in the two years of follow up.

Hypovolemic crises, spontaneous bacterial peritonitis and, very rarely, transudation of ascitic fluid through the abdominal wall are possible complications of nephrotic syndrome. The treatment of the latter is challenging, and it takes several weeks to improve. Adherence to treatment is a major issue in the care of children with nephrotic syndrome[2,3].

Funding

None.

Conflicts of interest

None.

Ethical disclosures

Protection of human and animal subjects. The authors declare that no experiments were performed on humans or animals for this study.

Confidentiality of data. The authors declare that they have followed the protocols of their work center on the publication of patient data.

Right to privacy and informed consent. The authors have obtained the written informed consent of the patients or subjects mentioned in the article. The corresponding author is in possession of this document.

Use of artificial intelligence for generating text. The authors declare that they have not used any type of generative artificial intelligence for the writing of this manuscript, nor for the creation of images, graphics, tables, or their corresponding captions.

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