Obstructive mesenteric cyst is not always the cause of obstruction

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Case report

A 3-day-old male newborn with a gestational age of 39 and a birth weight of 3270-g was referred to our hospital with persistent vomiting after every feeding and problems with defecation. On clinical examination the abdomen was distended but soft and not tender with hypoactive bowel sounds. An X-ray of the abdomen showed air in the upper part of the small bowel with a wide loop suggestive for intestinal obstruction (Fig. 1).

It was decided to perform an exploratory laparotomy. During laparotomy the proximal part of the small bowel was evidently distended. Next to a distended small bowel loop, 90 cm distally from Treitz’ ligament, several mesenteric cysts were in situ. The following day the patient underwent a second operation to remove the mesenteric cysts. The distal part of the small bowel was eviscerated and anastomosed to the proximal part of the ileum. The small bowel was drained with a jejunostomy.

Surgical procedure

Observation of the small bowel and mesente-

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Methodik (Fallbericht): Wir beschreiben den Fall eines Neugeborenen, bei dem während der Operation sowohl Dünnarmatresien als auch multiple Mesenterialzysten entdeckt wurden.


Schlussfolgerungen: Unseres Wissens ist dies der erste Patient, mit der Diagnose Dünnarmatresie und Mesenterialzysten. Obwohl wir wissen, dass es sich hierbei um eine seltene Kombination zweier Krankheitsbilder handelt, möchten wir darauf hinweisen, dass nur eine alleinige Enucleation einer Mesenterialzyste des Dünnarmes bei Zeichen einer Dünnarmobstruktion eventuell nicht ausreichend ist. Der Dünnarm sollte immer sorgfältig auf weitere Pathologien untersucht werden.

Schlüsselwörter: Ileal atresia, mesenteric cyst, lymphatic malformation, enucleation.

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Cysts could be seen in the mesentery of the ileum (Figs. 2 and 3). Because of the close association with the small bowel, enucleation of the different cysts was not possible as this would have jeopardized the vascularization. Therefore, a total excision of the cysts with the involved small bowel was performed. Even knowing that mesenteric cysts can be the source of obstruction the rest of the small bowel was evaluated carefully, in order to rule out further pathology. A catheter was placed in the small bowel and saline was injected. Two and ten cm further distally to the resected ileum the catheter could neither be shoved further nor saline injected through the small bowel. In these two segments no mesenteric cysts were found. These segments were considered as isolated type I atresias of the small bowel and both segments were resected.

Because of the evident dilatation of the total proximal part of the small bowel and the very small diameter of the unused distal segment of the small bowel an end-to-oblique anastomosis was not possible. Tapering of the proximal small bowel was also considered impossible and a double barrel ileostomy was created.

The patient was fed directly postoperatively and the efferent part of the ileostomy functioned well. He grew well. On day 8 after the operation the patient developed a rash around the ileostomy, and a closure of the ileostomy was scheduled 10 days after initial operation. During this operation the difference in diameter between the stoma and the fistula had decreased and the ileostomy could be taken down. Feeding could be restarted after three days. The child was discharged with a good weight gain and on normal feeding 12 days after the second operation.

**Pathology**

Pathological examination revealed multiple cysts with a maximal diameter of 3.5 cm and containing a clear serous fluid. Both the inner and outer walls of the cysts were smooth. Microscopically, the lining of the cyst walls was built up out of a thin fibrotic layer containing small vessels. The cysts were lined with a single layer of cells that are flat. These cells stained negative for Keratin AE1/AE3, CD34 and D2-40. In the walls separating the cysts, multiple cavities were found which stain positive for CD34 and D2-40. On the basis of immunohistochemical and morphological findings it was concluded that the cysts are lymphatic cysts.

**Discussion**

Mesenteric cysts are rare in children [1, 2]. Most frequent symptoms are abdominal distension, abdominal pain and vomiting [3, 4]. In very few cases mesenteric cysts can lead to acute symptoms, e.g. resulting in a possible volvulus.