Neonatal appendicitis – a case report

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Abstract
Case report: we report on a first child of a healthy 31-years old mother. After high-risk pregnancy birth was given to the baby in breech presentation by primary section in the 29th week (weight at birth: 1170 g). Increasing respiratory difficulties and suspected connatal infection made the referral to our department necessary. The beginning of gradual oral feeding had caused pronounced recurring abdominal symptoms from the very first day on. Consequently, for excluding Hirschsprung's disease a rectum biopsy was carried out giving positive proof of ganglionic cells throughout all layers of the biopsy. Due to deterioration and persisting abdominal symptoms a control was taken and a laparatomy was performed suspecting rotatory anomaly. Intraoperatively, a conglomerate tumour surrounding the appendix was found in the right abdomen. Histology: ulcero-phlegmonic appendicitis. Postoperatively there were no complications reported and peroral feeding was possible without any difficulty. Discussion: Acute appendicitis is thought to be extremely rare in newborns. Predominantly it has been described as a complication of NEC, Hirschsprung's disease, mucoviscidosis or inguinal hernia. The perforation rate is high. As a possible cause ischaemia has been under discussion. To our knowledge, since 1985 only 28 cases have been reported internationally.

Key words: newborn, appendicitis, etiopathology

Case description
F.A., born on 18/01/06, m., Premature baby 29th+0 week of gestation. First child of a healthy mother. Birth weight 1170 g, caesarean section because of breech presentation. Respiratory-distress-syndrome after primary treatment in an external facility, admission to the university clinical centre Kröllwitz because of an increasing respiratory insufficiency and suspicion of connatal infection.

Etiopathology
Peroral nutrition development from the first day of life, intermittent abstinence from food with a significantly distended abdomen, fixed intestinal loop and paralytic ileus.

08/02/06 colon contrast enema after clinical worsening and persisting abdominal symptoms: suspicion of malrotation and filiform stenosis in the area of the ileocecal valve, colon without passage obstacle, abnormal position of the caecum.

Fig. 1. Plain abdominal X-ray film, hanging, with distended intestinal loops

Fig. 2. Colon contrast enema
Neonatal appendicitis

Operations

13.02.06 serial rectal biopsy order to rule out Hirschsprung’s disease. DX: positive proof of ganglion cells in all biopsy levels, no indication for Hirschsprung’s disease. 24.02.06 exploratory laparotomy on suspicion of malrotation. Intraoperative diagnosis: conglomerate tumour right hypogastrium in the area of the appendix, st.P. App. perforated?

Fig. 3. Intraoperative finding

Histology

Ulcerative phlegmonous and granulating appendicitis.

Fig. 4. Histological finding

Postoperative course

Peroral nutrition development possible without any problems, constant gain in weight. Complete drinking perfor-

mance from 24.03.06. Parenteral nutrition for a period 62 days. Admission on 11.04.06 to the clinic for paediatric surgery in order to operate a sinistral inguinal hernia. Weight: 2985 g (9th percentile).

Discussion

An acute appendicitis at neonatal age is extremely rare. It is mainly described as a complication of necrotising enterocolitis, Hirschsprung’s disease, mucoviscidosis or inguinal hernia. The perforation ratio is high. Ischemic causes are discussed. Both, the early beginning of the symptoms (directly postnatal) and the histological changes as described above, allow the assumption that our patient had an inflammation of the appendix, that had already started at the prenatal stage. Since 1985 merely 28 cases have been described in international literature studied by us.

References


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