EMERGENCY CASEBOOK

An unusual acute abdomen in a 4-month-old infant

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We present a case of an unusual cause (pyometrium) for an acute abdomen in a four-month-old infant. A 4-month-old baby presented late one evening to the emergency department having been unwell for the past 2 weeks with a gastroenteritis-type illness. Her diarrhoea and vomiting (which was non-bilious) had settled in the 24 h before her attendance. Her parents said that she had not been herself; her appetite had decreased and she had cried inconsolably just before her attendance. They had noticed that her abdomen was becoming increasingly swollen and this was their main reason for presenting to the emergency department. There was no history of fever. In the 24 h before attendance, she had not vomited but had passed four yellow-coloured stools. Her medical history showed that she was born at 37 weeks' gestation and required admission to the special care baby unit due to being a small size for dates. She was not ventilated whilst in the special care baby unit. She also had a non-troublesome umbilical hernia and had previously had reflux.

On initial examination, she was clinically dehydrated, with sunken fontanelle. She had a temperature of 37.9°C, a pulse rate of 160 beats/min, a capillary refill time of < 2 s, and her saturations were 98% in room air. She was having intermittent bouts of inconsolable crying, alternating with periods of drowsiness. Her abdomen was grossly distended with overlying veins. It was tense and tender on palpation, and minimal bowel sounds were heard. Her chest was clear and heart sounds were normal.

Initial emergency room management included an abdominal radiograph (fig 1), intravenous access, routine blood tests, intravenous bolus fluids and an urgent paediatric review. A nasogastric tube was also inserted, and intravenous ceftriaxone and metronidazole were given. The blood results showed mild hyponatraemia (sodium 129), dehydration (urea 11.6, creatinine 85), and a raised white cell count ($21.2 \times 10^9/l$) and C reactive protein (147 mg/l).

The abdominal radiograph (fig 1) showed minimal gas in most parts of the abdomen and no gas on the right side. Seven radio-opaque areas were found on the film. These are "poppers" on the infant's clothing and should be ignored.

The baby was then transferred urgently to the regional paediatric surgical unit, and the same night was taken to theatre. Laparotomy was carried out and showed a large distended pyometrium, which was drained with a drainage catheter left in situ. Under the same anaesthetic, she had a cystoscopy, which showed a long tubular structure terminating in her bladder. A suprapubic catheter was inserted and contrast studies of the urogenital tract were arranged. The pyometrium was thought to be secondary to congenital malformation of the urogenital tract—in particular, a fistula between the urinary and genital tracts. She was discharged from hospital 10 days later with a drainage catheter in her uterus and a urethral catheter in situ. She re-attended 1 week later for removal of her urinary catheter, and was started on treatment with trimethoprim antibiotic prophylaxis.

DISCUSSION

Pyometra is the accumulation of pus in the uterine cavity.¹ It is not uncommon in postmenopausal women. In this age

group, it is generally caused by the occlusion of the cervical canal secondary to chronic atrophic cervicitis, benign or malignant cervical lesions, puerperal infections, foreign bodies or congenital anomalies.² However, it is thought to be relatively rare in the premenopausal age group.³

A MEDLINE search showed numerous case reports of pyometra in postmenopausal women. However, there are very few reports of pyometra in children. One article discussed the presentation and management of two children with pyometrocolpos, aged 1 year and 9 years old.⁴ It stated that pyometrocolpos can be caused by imperforate hymen or distal vaginal atresia. The typical presentation of such patients can include recurrent urinary tract infections, abdominal mass, findings of obstructive uropathy and, sometimes, secondary infection. The report goes on to discuss the management strategies in this condition. It recommends deferring definitive surgical correction until the local findings of infection resolve. Therefore, a temporary drainage that is both effective and minimally invasive is necessary. The two children in the case report received percutaneous drainage through the lower abdominal wall by computed tomography guidance under mild sedation. We could find no case reports of a pyometrium presenting in such a young patient, and therefore believe that this case is unique.

Figure 1 Abdominal radiograph.

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