



Two Cases of Kawasaki Disease with Intestinal Obstruction

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Abstract

Kawasaki disease is an acute febrile multisystem vasculitis. Multisystem might involment. Gastrointestinal symptoms frequently occur including diarrhoea, abdominal pain, and vomiting. Serum aminotransferases elevated, gallbladder hydrops also were reported. Intestinal pseudo-obstruction is a rarely form of gastrointestinal involvement. In this paper, we report two cases they presented with intestinal pseudo obstruction. Case one was a complete Kawasaki disease. She developed intestinal pseudo obstruction after IVIG and oral aspirin. Case 2 was a reoccurrence of Kawasaki disease. Her gastrointestinal symptoms presented with abdominal distension. Both patients have fluid and gas levels in the intestine in plain abdominal X-ray film. And the symptom resolved in a day.

Keywords: Kawasaki disease; Intestinal pseudo obstruction; Gastrointestinal symptoms

Case Presentation

Case 1

A 2-year-old girl presenting with a 5-day history of fever was admitted to our hospital. On admission, she was noted to have a maculopapular rash, bilateral conjunctivitis and enlarged neck lymph nodes; a diagnosis of Kawasaki disease was made. On day 1 of treatment, intravenous immunoglobulin at a dose of 2 g/Kg was started along with aspirin (50 mg/Kg/day). Blood tests showed a WBC count of $7.7 \times 10^9/L$ (32.00% neutrophils), platelets $212 \times 10^9/L$ and C-Reactive Protein (CRP) of 59.60 mg/L. Blood pressure, urea, creatinine, serum electrolytes and transaminases were all normal. ESR was raised. On day 2 the fever broke, rash disappeared, and conjunctivitis was improving. However, on day 3, after the child was given aspirin, the child presented with repeated vomiting along with a significant decrease of bowel sounds. A plain abdominal X-ray (Figure 1A) revealed multiple fluid and gas levels in the intestine and a Small Bowel Obstruction (SBO). A diagnosis of paralytic ileus was subsequently made due to the absence of signs of mechanical obstruction or perforation. The child later developed another fever and her palms and fingers turned red, consistent with Kawasaki disease. On day 4, a further plain abdominal X-ray (Figure 1B and 1C) showed a decrease of fluid and gas levels. By day 7, repeated blood examinations showed decreased ESR, normalised CRP, WBC and mild thrombocytosis (platelets $308 \times 10^9/L$). Subsequent echocardiography (Figure 1D) revealed that the lumen of the opening and trunk of the left coronary artery was widened. Electrocardiography was normal. The child was discharged out of our care.

Case 2

A 2-year-old girl, previously diagnosed with Kawasaki disease one year earlier, presents with a 5-day history of fever, 2 days of coughing and 1 day of conjunctivitis. On examination there was edema of hands and feet, enlarged neck lymph nodes. This child was admitted to our hospital. It was noted that transient rashes appeared in the duration of her stay. On the second day of admission, considering the prolonged fever (>5d), conjunctivitis, rash, edema of hands and feet, and enlargement of cervical lymph nodes, the child was diagnosed with a reoccurrence of Kawasaki disease. Intravenous immunoglobulin at a dose of 2 g/Kg and with aspirin (50 mg/Kg/day) was started. Blood tests showed a WBC count of $10.4 \times 10^9/L$ (69.70% neutrophils) platelets $244 \times 10^9/L$ and C-Reactive Protein (CRP) at 114.56 mg/L. Blood pressure, urea, creatinine and serum electrolytes were all normal. Transaminase was at 69.86 U/L. The fecal occult blood test was positive. On day 3, all symptoms eased, however abdominal distension occurred after taking aspirin orally. On day 4, due to worsening abdominal distension, a plain abdominal X-ray (Figure 2A) revealed fluid and gas levels in the intestine. Conservative treatment, i.e. fasting and gastrointestinal decompression, was started and symptoms of abdominal distension improved. On day 4 a further plain film abdominal X-ray was taken (Figure 2B) showing a reduction in gas accumulation.

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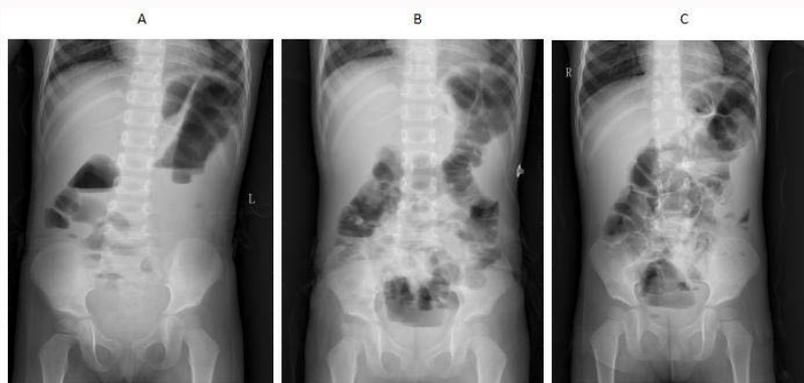


Figure 1A: The first plain abdominal X-ray revealed multiple fluid and gas levels in the intestine and a small bowel obstruction. **B and C:** A further plain abdominal X-ray showed a decrease of fluid and gas levels.

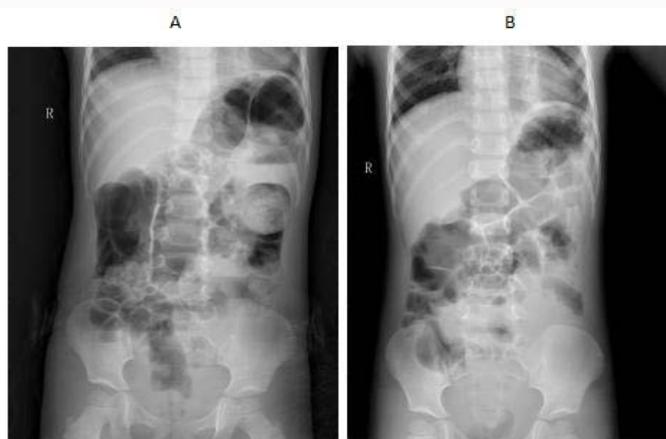


Figure 2A: The first plain abdominal X-ray revealed fluid and gas levels in the intestine. **B:** The second plain film abdominal X-ray showed a reduction in gas accumulation.

Subsequent echocardiography (Figure 2C) revealed that the lumen of the opening and trunk of the left coronary artery was widened. A repeat fecal occult blood test was negative. By day 6, the child's symptoms had regressed, a repeat blood test showed a platelet count of $792 \times 10^9/L$. She was subsequently discharged at the request of the parents.

Kawasaki Disease (KD) is an acute systemic vasculitis which has many serious complications. The literature suggests intestinal obstruction is possibly due to vascular insufficiency related to mesenteric artery vasculitis with bowel ischemia and associated myenteric plexus dysfunction [1]. To our knowledge, intestinal pseudo-obstruction has been rarely described at onset of KD before the appearance of typical manifestations. In some cases, acute abdominal pain, distension, vomiting and jaundice are the most common presenting features [2-6]. This may confuse the workup causing delay in the diagnosis and treatment, thus increasing the risk of a hazardous and unnecessary laparotomy [1-6]. Both children developed symptoms after taking aspirin. It is known that gastrointestinal side effects may occur due to use of aspirin. However, in the cases we present, gastrointestinal symptoms after administering aspirin were caused by a pseudo-obstruction, not due to the aspirin. If children with vomiting, abdominal distension and other symptoms are treated for Kawasaki disease, an abdominal X-Ray should, in necessary cases,

be taken to confirm the cause of any new gastrointestinal symptoms.

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