Case report

Opiate withdrawal syndrome mimicking postoperative intestinal obstruction

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Patients with complicated inflammatory bowel disease commonly undergo repeated surgical procedures, often against a background of chronic opiate use. We describe a case in which a postoperative attempt to withdraw opiate analgesia on two separate occasions led to a clinical syndrome strongly suggestive of intestinal obstruction, the signs and symptoms of which settled rapidly on re-introduction of opiates. Small bowel contrast studies indicated a level of obstruction which not only fluctuated, but occurred at an unusual site for mechanical obstruction. In patients with a history of long-standing opiate use, postoperative opiate withdrawal can cause a significant, functional bowel disorder and should be borne in mind in the differential diagnosis of postoperative intestinal obstruction. Patients can be treated effectively with clonidine.

Key words: Opiate withdrawal – Intestinal obstruction – Postoperative – Cohn's disease

Small intestinal obstruction in the early postoperative period is difficult to manage and failure to settle on conservative treatment may necessitate a difficult further surgical procedure, with significant potential for complications.¹ We report here a case in which a functional small intestinal obstruction developed as a consequence of the withdrawal of opiate analgesia. Failure to recognise opiate withdrawal syndrome in the postoperative period in patients with a history of chronic opiate use may lead to unnecessary and complicated further surgery.

Case report

A 29-year-old man was referred to the Intestinal Failure Unit of Hope Hospital, Salford with an enterocutaneous fistula which had complicated total colectomy for Crohn's colitis in the referring hospital. He had had Crohn's

disease for 15 years and had been requiring 75 µg/h of subcutaneous fentanyl and up to 80 mg of oral morphine sulphate for over 8 years. Colectomy had been complicated by colicky abdominal pain and distention, vomiting and failure of the stoma to function on the 6th postoperative day, which developed as opiate analgesia was being withdrawn. Small bowel obstruction was diagnosed, but a laparotomy failed to reveal any site of mechanical small intestinal obstruction and several enterotomies were made, which resulted in a postoperative fistula.

Resection of the fistula was technically uneventful, but the postoperative course was complicated by poor postoperative pain relief, despite use of a combination of both epidural (bupivacaine 0.125% and fentanyl 4 µg/ml) and intravenous patient-controlled analgesia (PCA, morphine sulphate 2 mg/h). By the 6 h postoperative day, however,

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Figure 1 Gastrografin small bowel contrast enema study on 9th postoperative day, showing failure of contrast to progress beyond the third part of the duodenum after 2 h.

Figure 2 Gastrografin small bowel contrast enema on 14th postoperative day, showing failure of contrast to progress beyond proximal jejunum.

pain control appeared satisfactory, the ileostomy had begun to work normally and oral diet had resumed. The epidural catheter was removed, and, 2 days later, the PCA was withdrawn and replaced with oral analgesia (morphine sulphate 30 mg qds, and morphine sulphate 10–20 mg i.m. prn). Within 24 h, the patient began to complain of severe colicky abdominal pain. This was associated with abdominal distention and tenderness, profuse bile-stained vomiting and failure of the ileostomy to function. A gastrografin contrast study on the 9th postoperative day showed failure of contrast to pass beyond the third part of the duodenum (Fig. 1). A morphine PCA infusion (2 mg/h) was re-started and symptoms resolved completely within 12 h. A CT scan of the abdomen showed no abnormality to account for the apparent obstruction. The PCA was slowly withdrawn over the next 4 days and replaced by oral morphine. This was followed, within 12 h, by a return of identical symptoms of colicky abdominal pain, profuse vomiting of bile-stained fluid and loss of large amounts of clear, non-bile stained fluid via the ileostomy. A further contrast study (Fig. 2) revealed an apparent high-grade small bowel obstruction, this time in the proximal jejunum. Symptoms settled completely within 8 h of re-introduction of parenteral morphine, suggesting the diagnosis of opiate

withdrawal syndrome. Further recovery was uncomplicated when a withdrawal regimen of both oral opiates and clonidine (0.1 mg bd initially, increasing to 0.1 mg qds) was commenced, and the patient was subsequently discharged uneventfully. Full-dose clonidine was continued for 1 week and then tapered off over 3 days. Opiates were subsequently withdrawn completely over a 6-month period and follow-up to 1 year has not been associated with any additional complications.

Discussion

Postoperative small bowel obstruction commonly complicates major abdominal surgery.² In this case, three separate episodes of postoperative intestinal obstruction occurred without an apparent mechanical cause. The temporal relationship with opiate withdrawal, absence of a structural lesion and the shifting locus of apparent obstruction in the second and third episodes established the diagnosis of opiate withdrawal syndrome. Opiate withdrawal in patients with chronic pain syndromes is recognised as a cause of bowel symptoms^{3,4} and patients with narcotic bowel syndrome (due to chronic opiate therapy) or opiate withdrawal syndrome may develop colicky abdominal pain, vomiting, diarrhoea and

intestinal pseudo-obstruction.⁵ The pathogenesis of the intestinal manifestations of opiate withdrawal syndrome is believed to relate to a progressive reversal of opiate-mediated depression of motility and intestinal fluid secretion.⁶ The effects of clonidine (an α_2 -adrenergic receptor agonist) are mediated via both a direct action on intestinal smooth muscle and indirect effects on the enteric pacemaker system.⁷ The net result of these effects is to induce relaxation of the gastrointestinal tract.⁵ The key feature of this case is that the opiate withdrawal syndrome complicated recovery from abdominal surgery and was mistaken for mechanical intestinal obstruction. This led, on the first occasion, to a potentially avoidable laparotomy and consequent small bowel fistula. Opiate withdrawal syndrome should be considered in any patient with a history of chronic opiate use who develops intestinal obstruction following withdrawal of post-operative opiate analgesia. A shifting locus of intestinal obstruction and rapid resolution of signs and symptoms following opiate replacement therapy strongly suggest

the underlying diagnosis and treatment with a careful withdrawal regimen, supported with clonidine, provides effective treatment.

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