CASE REPORTS

Silent acute gastric dilatation due to salmonella infection in a diabetic elderly

KANNAYIRAM ALAGIAKRISHNAN¹, MATHEW FRANKEL²

¹Division of Geriatric Medicine, Department of Medicine, University of Alberta, B139N Clinical Sciences Building, 8440-112 Street, Edmonton, Alberta, Canada T6G 2G3
²Department of Medicine, University of Alberta, Edmonton, Alberta, Canada

Address correspondence to: K. Alagiakrishnan. Tel: (+1) 780 407 6122; Fax: (+1) 780 407 2006. Email: kalagiakri@aol.com

Abstract

Acute gastric dilatation is a potentially life-threatening entity that has been reported in patients with some acute infections like pneumonia and staphylococcal bacteremia. We describe a case of acute gastric dilatation presenting atypically in a 65-year-old diabetic with Salmonella diarrhoea. By the fourth day of hospital admission the patient’s abdomen was distended in the absence of pain, nausea or vomiting. An abdominal radiograph showed marked gastric dilatation with no evidence of obstruction or ileus. With nasogastric tube insertion and initiation of intravenous antibiotics, the stomach was back to normal size. It is likely that Salmonella infection was the major cause of acute gastric dilatation in this patient.

Keywords: acute gastric distension, salmonella infection, diabetes mellitus, elderly

A 65-year-old female presented with a 3-day history of large volume diarrhoea and incontinence of stool that was non-bloody. She denied any recent travel or antibiotic use. Her past medical history included well-controlled diabetes mellitus, hypertension, dyslipidaemia, diverticulosis and osteoarthritis. Upon admission, the patient was found to be hypotensive but, with fluid resuscitation, her blood pressure quickly normalised. Over the course of 4 days, her abdomen became progressively distended in the absence of pain, nausea or vomiting. Her abdomen was soft and non-tender, with bowel sounds present. On the fourth day of admission, an abdominal X-ray showed marked gastric dilatation with no evidence of obstruction or ileus (Figure 1). Blood and stool cultures were positive for Salmonella enteriditis, sensitive to ciprofloxacin. A nasogastric tube was inserted for decompression, and then, the patient was started on IV ciprofloxacin and her hypokalaemia corrected. Within 3 days, a marked decrease in gastric dilatation was seen in the repeat abdominal X-rays and the nasogastric tube was removed.

Acute gastric dilatation (AGD) is an uncommon entity with various aetiologies seen in individuals of all ages [1, 2]. Non-obstructive causes include anorexia nervosa, bulimia, electrolyte abnormalities, trauma, diabetes and acute infections [3]. Salmonella infection, diabetes and hypokalaemia most likely contributed to this patient’s AGD. Hypokalaemia is also associated with paralytic ileus, which, interestingly, was not seen in this case making infection the most likely cause. To our knowledge, there is only one other published case of AGD occurring in the setting of Salmonella infection [4]. There have also been reports of AGD developing in diabetics with Staphylococcus bacteremia and pneumonia of various infectious aetiologies [2–5]. Diabetics are at increased risk of AGD due to impaired gastric contractility resulting from either autonomic neuropathy and/or rapid fluctuations in blood glucose. Despite their increased susceptibility, it remains an infrequent occurrence [5]. In our case, it is likely that infection with Salmonella-induced AGD in an already susceptible patient and it has been proposed that bacterial toxins may play a role in such cases [5].

The presenting symptoms are usually acute onset abdominal distension, pain and vomiting. This case is unusual in that the patient had minimal discomfort and no vomiting. This ‘silent gastroparesis’ was reported in another case of AGD in a diabetic [5]. Management involves prompt nasogastric decompression and treatment of the
underlying condition that in diabetics may include prokinetic agents [6].

To our knowledge, AGD due to Salmonella diarrhoea in a diabetic patient has not been previously reported. In elderly, diabetics with infection and presenting with non-specific abdominal symptoms and distention, AGD should be considered in the differential diagnosis.

Key points

- Acute gastric distension is a medical emergency.
- Elderly may have an atypical presentation with acute gastric distension.
- Infection can cause acute gastric distension in an already susceptible patient.
- Nasogastric decompression with appropriate antibiotics reverses the condition.

Conflicts of interest

None declared.

References