

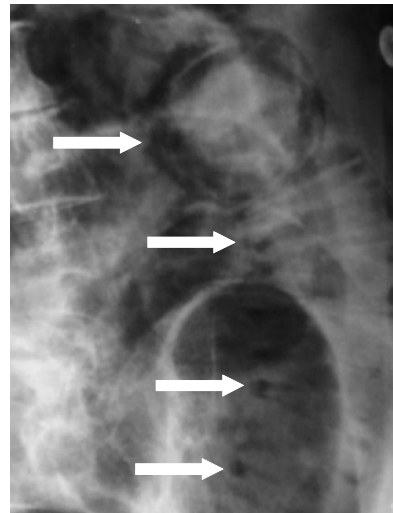
**(Refer to page 187)**

**Answer: Small bowel infarction**

The radiological findings on the plain abdominal radiograph included dilated small bowel loops, loss of polygonal gas shape, bowel wall oedema and pneumatosis intestinalis (intramural gas indicated by arrows - **Panel**), consistent with a diagnosis of bowel infarction. The findings are similar to those described for necrotising enterocolitis (NEC) in premature babies. In adult this is referred to as adult-NEC. <sup>1</sup>

Bowel ischaemia or infarction is more common among the elderly population with atherosclerosis and atrial fibrillation. Vascular stenosis or embolism causes reduction in mesenteric blood flow which leads to mucosal ischaemia, oedema and eventual tissue necrosis. Mucosal damage then leads to bacterial translocations, infection and gas formation especially if there is involvement by anaerobic organisms. In NEC, it is postulated that the infection is the primary event resulting in bowel ischaemia.

The clinical presentations of bowel ischaemia can be chronic or acute. Vessel stenosis often results in chronic post-prandial abdominal pain, the so called 'intestinal angina'. Embolism on the other hand typically causes a sudden onset of abdominal pain that gradually worsens. There is often a disparity between clinical findings and symptoms in bowel ischaemia. Multiorgan failure rapidly follows infarction and fatality rate is high even



Magnified image of the radiograph from page 186 showing intramural gas indicated by arrows

with intervention. <sup>2</sup>

Management in cases with bowel ischaemia aims mainly to the condition and provide supportive measures. The patient should be maintained as nil orally, given adequate intravenous fluid resuscitation, broad spectrum intravenous antibiotics, kept with nasogastric tube decompression and anticoagulation therapy if there is embolism. Close clinical and laboratory monitoring are mandatory as there can be rapid deterioration into multi-organ failure. Surgical intervention is indicated if there is evidence of necrosis or bowel perforation or clinical deterioration over 12 to 24 hours of observation. Long-term complications includes short gut syndrome and malabsorption. Prognosis is poor with bowel infarction and is related to the length of bowel affected as well as the patient's overall condition.

**REFERENCES**

- 1: Zachariah SK. Adult necrotizing enterocolitis and non occlusive mesenteric ischemia. *J Emerg Trauma Shock.* 2011; 4:430-2.
- 2: Acosta S, Ogren M, Sternby NH, Berqvist D, Björck M. Fatal nonocclusive mesenteric ischemia: Population-based incidence and risk factors. *J Intern Med.* 2006; 259:305-13.