

Case Blog

Title: Traumatic Pneumatosis Intestinalis

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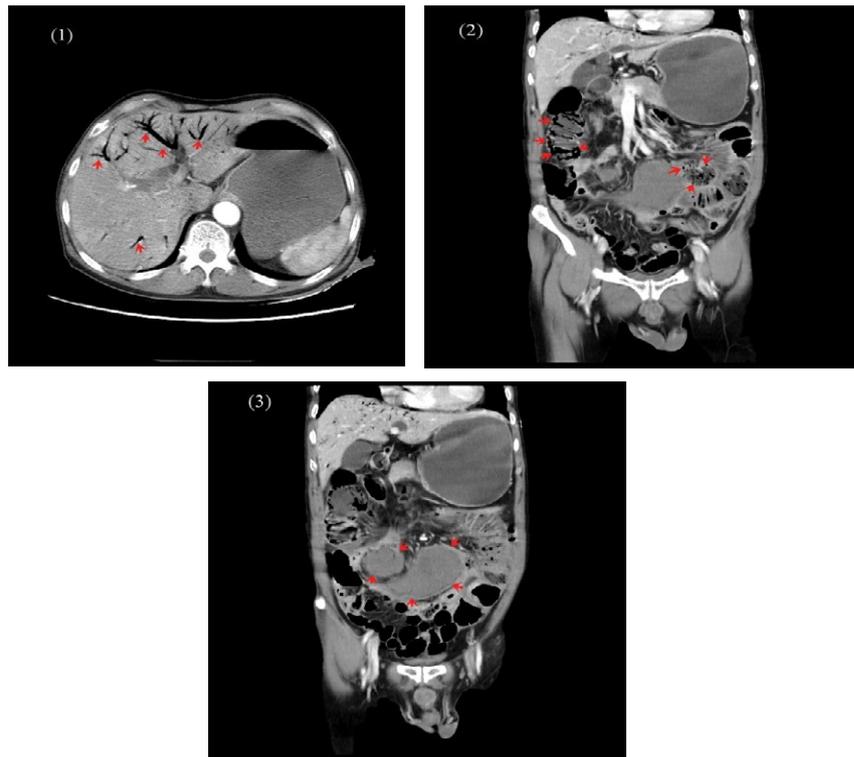


Figure 1: Air in the portal venous system.

Figure 2: Gas within the wall of the bowel.

Figure 3: Mesenteric hematoma in the lower abdomen with fat stranding.

Clinical Presentation

A 67-year-old mentally retarded man presented to the emergency department due to abdominal pain of 7 days duration after he was punched in the abdomen. Physical examinations showed distended abdomen with a marked tenderness, and rebounding pain. Laboratory results included an amylase of 52 U/L and lactate of 34.6 mg/dL. Computed tomography (CT) demonstrated the following findings: portal vein gas (Figure 1), continued dilatation of small intestine loops with pneumatosis intestinalis (Figure 2), and hematoma (Figure 3) over low abdomen. He received exploratory laparotomy and the results showed a huge hematoma at low abdomen and it adhered with the small bowel densely, resulted in small bowel total obstruction and ischemic change over mucosa. He was discharged smoothly 41 days later after surgery.

PI is a typical sign of CT image for ischemic bowel disease and it necessitates operative intervention. But recently more and more research found that PI result from trauma or non-trauma may also run a benign course that does not necessarily require operative repair or resection at the time of celiotomy [1-4]. A review of literature demonstrated that portal venous gas does not necessarily indicate bowel necrosis in trauma patients [5]. However, in this case, we thought the developing hematoma may cause bowel mechanical obstruction, then result in bowel necrosis.

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References

1. Kelly BS Jr, Meyers P, Choe KA, Hurst J, Luchette FA (1997) Traumatic pneumatosis cystoides intestinalis with portal venous air embolism. *J Trauma* 42: 112-114.
2. Jona JZ (2000) Benign pneumatosis intestinalis coli after blunt trauma to the abdomen in a child. *J Pediatr Surg* 35: 1109-1111.
3. Gurland B, Dolgin SE, Shlasko E, Kim U (1998) Pneumatosis intestinalis and portal vein gas after blunt abdominal trauma. *J Pediatr Surg* 33: 1309-1311.
4. Koutouzis T, Lee J (2000) Blunt abdominal trauma resulting in Pneumatosis intestinalis in an infant. *Ann Emerg Med* 36: 619-621.
5. Furuya Y, Yasuhara H, Ariki K, Yanagie H, Naka S, et al. (2002) Hepatic portal venous gas caused by blunt abdominal trauma: is it a true ominous sign of bowel necrosis? Report of a case. *Surg Today* 32: 655-658.