

Acute massive gastric dilation: an unusual presentation of metastatic urinary bladder cancer

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Acute massive gastric dilation represents the extreme form of acute gastric dilation (AGD). Obstruction of distal duodenum can cause AGD with bilious nasogastric drainage. Most common causes are pancreatic neoplasms and pseudocysts, annular pancreas, superior mesenteric artery syndrome, retroperitoneal fibrosis and tumors, duodenal neoplasms and hematoma [1]. AGD complicated with gastric perforation, severe gastritis and abdominal compartment

syndrome constitutes a surgical emergency. However, in the setting of non-complicated AGD, gastric decompression, parenteral nutrition, antibiotics and appropriate treatment of associated diseases may be sufficient for several days before undertaking repair [2]. Herein, we present a case of urinary bladder carcinoma that had advanced in the retroperitoneum causing distal duodenal obstruction and massive uncomplicated AGD.

A 78-year-old male presented with acute abdominal pain and a progressively distended abdomen. Direct questioning revealed a 3-month history of abdominal discomfort, weight loss of 22 kg and 2 episodes of hematuria. The only relevant past medical history was type 2 diabetes mellitus treated with vildagliptin/metformin for 3 years.

On admission, inspection revealed a massively distended abdomen. A succussion splash in the upper abdomen and diffuse tenderness were present. Blood pressure was 85/50 mmHg, heart rate 125 beats/min, SaO₂ 88% on air and axillary temperature 37.6°C. Laboratory tests were remarkable for WBC count 14100 /mm³, absolute neutrophil count 12150 /mm³, hemoglobin 12.6 g/dL and creatinine 2.4 mg/dL.

A nasogastric tube was placed without difficulty. The impressive volume of 9.5 L of bilious material was withdrawn. After gastric decompression the patient became hemodynamically stable. Clinical, laboratory findings and electrocardiographic abnormalities (sinus tachycardia with T-wave inversion in leads V₃₋₆) improved. Abdominal x-rays showed no findings of pneumoperitoneum. Intra-abdominal pressure was 12 cmH₂O (grade I intra-abdominal hypertension according to the Burch system). Upper GI images with Gastrografin® showed a massively dilated stomach, no extravasation, normal pyloric channel and an abrupt stricture at distal duodenum. A contrast-enhanced CT scan revealed: a) an enhanced mass along the left lateral bladder wall with obstruction of the left ureteric orifice and invasion to the perivesical fat; b) para-aortic, para-caval, retrocrural lymphadenopathy; c) an infiltrative mass in the retroperitoneum causing obstruction of the third portion of duodenum (Fig. 1); and d) multiple pulmonary metastases in lower zones (T3b/N3/M1 disease). Cystoscopy revealed a solid bladder tumor (poorly differentiated transitional cell carcinoma), with obstruction of the left ureteric orifice and diffuse diverticula. Bilateral ureteral stents were placed. Unfortunately on day 2, the patient developed an episode of atrial fibrillation, which failed several attempts of cardioversion and he finally expired.

In summary, the advanced stage of the primary urinary bladder cancer prompted the diagnosis of metastatic retroperitoneal tumor with infiltration of distal duodenum. Several cases of massive AGD have been described worldwide but to our knowledge this is the second due to bladder cancer metastasis to the duodenum [3]. What is interesting in our case is that the stomach was massively distended; however no perforation occurred. To our knowledge this is the first case reported in which 9.5 L of gastric fluid were initially aspirated without gastric rupture [4]. Another remarkable fact is that our

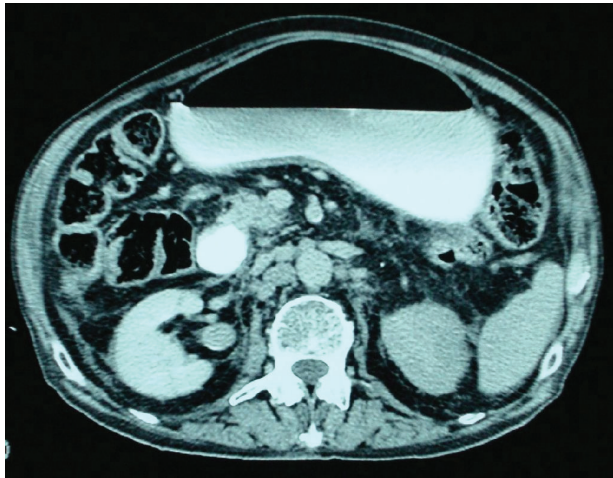


Figure 1 CT scan showing an infiltrative soft tissue mass in the retroperitoneum due to a metastatic transitional cell urinary bladder carcinoma, causing obstruction of the third portion of the duodenum and para-aortic lymphadenopathy

patient was unable to vomit. Although emesis is the dominant symptom, inability to vomit has also been reported and can be explained by occlusion of the gastroesophageal junction by the distended fundus, which angulates the esophagus against the right crus of the diaphragm [5].

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Conflict of Interest: None

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