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ΑΡΧΕΙΑ ΕΛΛΗΝΙΚΗΣ ΙΑΤΡΙΚΗΣ 2020, 37(3):420–421
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Surgery Quiz – Case 25

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A 87-year-old female patient with a 7-year history of stage IV Parkinson's disease treated inter alia with levodopa/carvidopa/entacapone (per os 200 mg/50 mg/200 mg q6h) admitted to the emergency department due to progressive abdominal distention over the preceding 8 days. On admission, the patient was afebrile, bedridden, incontinent, dysarthric, confused and showed severe rigidity and dyskinesia. Abdominal physical examination revealed abdominal distention and upper abdominal succussion splash. Laboratory tests revealed increased LDH and CPK levels. Brain computed tomography (CT) was normal and abdominal CT showed a massively dilated stomach, linear submucosal and subserosal intramural gas collection along the wall of the lesser curvature and two small free subdiaphragmatic air bubbles (fig. 1). Gastric decompression through a nasogastric tube withdrew 5 L of gastric material. Endoscopy revealed gastric antrum and body spreading patchy redness and multiple small linear hemorrhagic erosions.

What is your diagnosis?

Comment

Based on imaging findings, the patient diagnosed with gastric pneumatosis. The etiology of gastric pneumatosis seemed to be Parkinson's disease induced acute massive gastric dilation. On initial assessment, gastric pneumatosis seemed to be benign as: (a) No worrisome clinical findings, such as hypotension, tachycardia and acute abdomen on physical examination, were present; (b) no worrisome laboratory findings, such as metabolic acidosis, leukocytosis and findings of acute renal failure, were present; and (c) no worrisome imaging findings, such as ascites and portal venous gas, were present. The patient treated conservatively under strict re-evaluation with cessation of enteral nutrition, nasogastric decompression, high dose of proton pump inhibitors (PPI) and broad spectrum antibiotics.

During re-evaluation, the patient developed: (a) Continuous hyperthermia with temperatures over 39 °C. Chest CT showed no pulmonary cause of fever, repeated abdominal CT showed complete remission of gastric dilation and pneumatosis (fig. 2), and blood and urine cultures were negative; (b) extreme generalized muscular rigidity along with tremor, anarthria and dysphagia; (c) autonomic instability including paroxysmal atrial fibrillation with rapid ventricular response and tachypnea; and (d) profound encephalopathy with stupor and eventually coma. Repeated brain CT was normal. Our Parkinson's disease patient seemed to develop typical clinical syndrome of akinetic crisis.

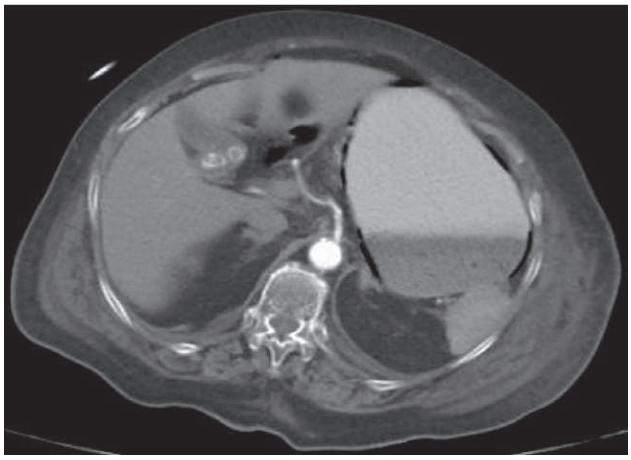

Figure 1

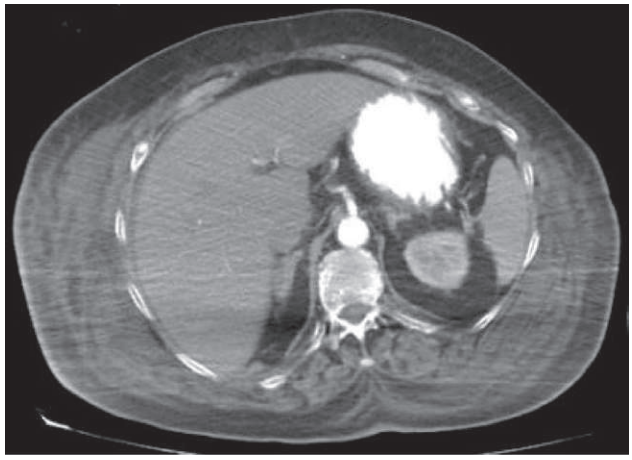

Figure 2. Repeated computed tomography (CT) showed complete remission of gastric dilation and pneumatosis.

The sequence of events was as follows; firstly, the patient developed Parkinson's disease induced acute massive gastric dilation which led to gastric pneumatosis. Secondly, acute gastric dilation led to antiparkinson medication malabsorption resulting in akinetic crisis. Akinetic crisis was treated with supportive care along with apomorphine (intermittent SC 25 mg q4h), hydrocortisone (continuous IV 250 mg/day), co-beneldopa (ODTs 250 mg q6h) and entacapone (ODTs 200 mg q6h) through a nasoduodenal feeding-tube. However, the patient failed to recover and finally died due to uncontrolled prolonged hyperthermia and cardiorespiratory instability in the setting of irreversible akinetic crisis.

References

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Diagnosis: *Gastric pneumatosis complicating acute gastric dilation in an advanced stage Parkinson's disease patient on fatal akinetic crisis*