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Rare case of duodenal obstruction due to abdominal aortic aneurysm, "aortoduodenal syndrome": An Indian case report

Dear Editor,

We report a case of a 73-year-old woman, who presented with complaints of gradual onset of feeling of fullness of abdomen, early satiety, and occasional vomiting. She was a thin-built woman and her examination revealed pallor with a nontender, pulsatile lump in the epigastrium. Suspecting an abdominal aortic aneurysm (AAA) and bowel obstruction, a computed tomography (CT) angiogram with oral contrast was performed, which confirmed an infrarenal AAA measuring up to 8.1 cm in maximum diameter. There was dilatation of the first and second parts of the duodenum, which measured up to 4 cm in diameter with an extrinsically compressed third part of duodenum between the grossly dilated AAA and superior mesenteric artery (SMA) [Figures 1 and 2]. These findings were suggestive of a rare complication of AAA, called "aortoduodenal syndrome." Our patient was managed conservatively and her symptoms gradually improved. The disease prognostication was conveyed to the patient and her family and she was referred to other tertiary care institute for primary repair of her AAA; however, she was lost to follow-up. Aortoduodenal syndrome was initially described by William Osler in 1905, in which he described the findings of bowel obstruction primarily due to stretching of the third part of duodenum by a large AAA.[1] The resultant luminal compromise is made more marked by the opposing SMA or anterior abdominal wall, especially in a thin emaciated patient. Very few reports have been found in literature with regard to aortoduodenal syndrome and no report is present in the Indian population to the knowledge of the authors. Some of the previously reported cases of aortoduodenal syndrome presented with features of acute intestinal obstruction and associated electrolyte imbalance that required correction and stabilization prior to surgery.[2-4] The morbidity of

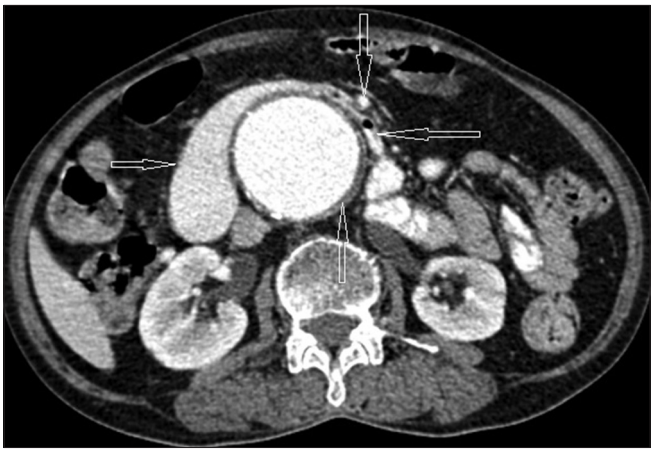

Figure 1: CT angiogram with oral contrast axial view showing dilated second part of the duodenum (open white arrow to left) with compression of the third part of the duodenum (open white arrow to right), which is compressed between the SMA (open white arrow pointing downward) and the abdominal aortic aneurysm (open white arrow pointing upward)

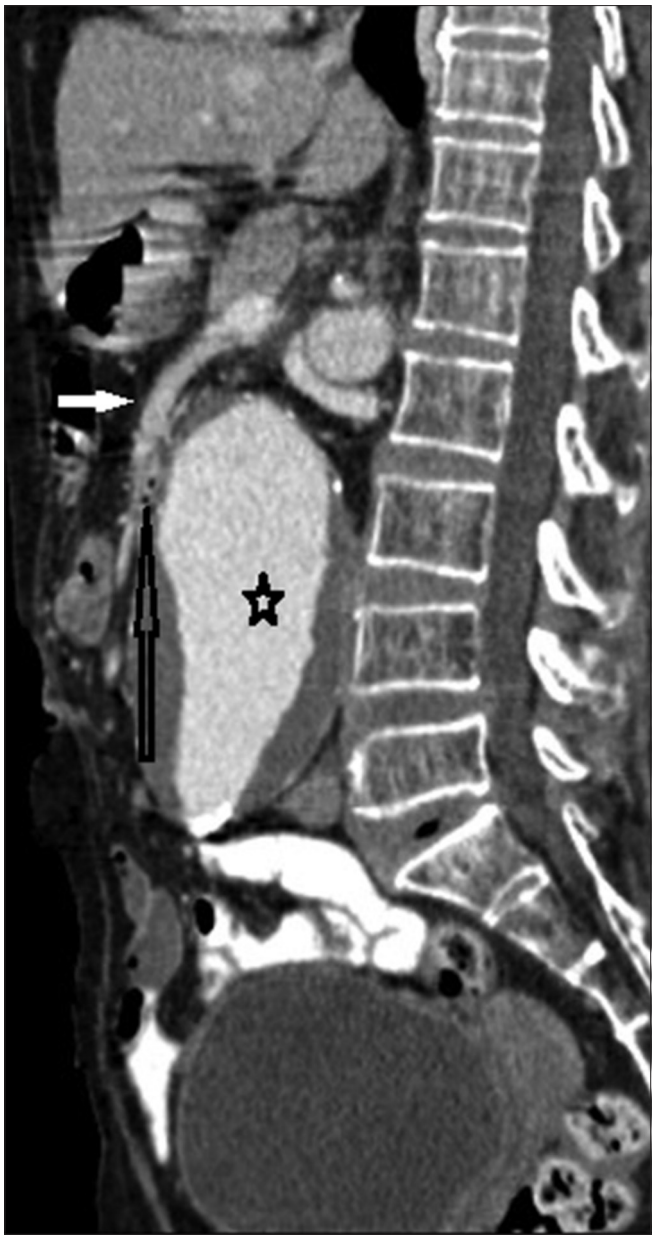

Figure 2: CT angiogram sagittal view showing the compressed third part of the duodenum (open black arrow) between the SMA (solid white arrow) and the abdominal aortic aneurysm (black star)

patients with aortoduodenal syndrome is due to the other accompanying complications such as aspiration pneumonia, renal failure, and metabolic derangements. There is better management outcome with primary repair of the AAA compared to gastrointestinal bypass, which has a higher postoperative morbidity and mortality.[5] Most of the patients present in a malnourished state and may do better with less aggressive management.[3] Aortoduodenal syndrome has not been reported in the Indian population to the knowledge of the authors; hence, we would like to highlight that aortoduodenal syndrome should be considered in an elderly patient presenting with features of intestinal obstruction in the presence of an AAA, so as to reduce the morbidity and mortality associated with the disease.

Declaration of patient consent

The authors certify that they have obtained all appropriate patient consent forms. In the form, the patient has given her consent for her images and other clinical information to be reported in the journal. The patients understand that their names and initials will not be published, and due efforts will be made to conceal their identity, but anonymity cannot be guaranteed.

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Conflicts of interest

There are no conflicts of interest.

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