Functional paraganglioma surrounding the superior mesenteric artery

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A 79-year-old man with hypertension complained of left-sided abdominal pain. Abdominal computed tomography (CT) revealed a solid mass (59×59×54 mm in size) in the left upper abdomen, with the impression of the superior mesenteric artery (SMA) (Figure 1A and 1B). The 24-hour urinary normetanephrine concentration was 38215 µg/24 h (reference range, 162–527 µg/24 h). A preoperative diagnosis of functional paraganglioma was established. The patient also underwent a preoperative preparation using alpha-blockade with doxazosin mesylate. An exploratory laparotomy revealed masses adjacent to the pancreas, left renal vein, and surrounding the SMA (Figure 1C). Intraoperative ultrasonography showed no artery wall invasion. The mass was successfully dissected off the SMA (Figure 1D), and a complete oncologic resection was obtained. A pathologic examination revealed evidence of positive staining for synaptophysin, chromogranin, S100, and Sox10. The patient’s blood pressure normalized, and he was discharged 7 days after the operation.

Paraganglioma is a rare tumor of neural crest origin, usually considered as benign with the potential to metastasize and the incidence of malignancy of about 10%. Although the majority of these tumors are located within the adrenal medulla, they can be also found in extra-adrenal sites. Most commonly, paraganglioma is adjacent to the aorta in the area corresponding to the Zuckerkandl organ.1-3 To our knowledge, a paraganglioma that would develop around the SMA has not been previously described.

ARTICLE INFORMATION

CONFLICT OF INTEREST

None declared.

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**FIGURE 1**  
C – a view during laparotomy: masses adjacent to the pancreas and left renal vein (LRV) and surrounding the superior mesenteric artery;  
D – a view after the mass was dissected. The arrows on both panels indicate the superior mesenteric artery and paraganglioma.

**REFERENCES**

