

Intratumoral Superior Mesenteric Artery Pseudoaneurysm Rupture

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An 85-year-old man was admitted to our Emergency Department for acute abdominal pain. He underwent a right colectomy for a second stage adenocarcinoma 6 months before. Multiphase contrast-enhanced computed tomography with volume rendering (Figs. 1-2) and maximum intensity projection (Fig. 3) reconstructions showed a neoplastic encasement of the superior mesenteric artery (SMA) by a mesenteric tumor recurrence (Fig. 1, asterisks), surrounded by multiple nodal lesions (Fig. 1, arrow). Superior mesenteric vein was also involved by the lesion (Fig. 1, arrowhead). A complete SMA occlusion was observed on the distal tumoral margin (Figs. 2-3, curved arrow), with collateral vessels preserving downstream vascularization (Fig. 3, asterisks). Moreover, an eccentric SMA pseudoaneurysm developed upstream the occlusion (Figs. 2-3, arrow), with a contained pseudoaneurysm rupture occurring inside the neoplasm (Figs. 2-3, arrowhead). The patient was not suitable for surgery or interventional procedures, and he died a few days later.

Mesenteric vascular pathology diagnosis might be challenging in emergency departments in oncological patients [1]. Tumor infiltration rarely produces major arteries rupture, with aortic invasion and rupture more extensive described in retroperitoneal malignancies (i.e. germ cell testicular cancer, soft tissue sarcomas, paragangliomas, lymphomas) [2]. SMA aneurysms account for 6.9% of all visceral artery aneurysms, with atherosclerosis, infection, trauma, inflammation, fibromuscular dysplasia, collagenopathies and arterial dissection being the most frequent etiologies described in literature [3]. To our knowledge, neoplastic SMA pseudoaneurysm rupture is an extremely rare and life-

threatening condition, previously described in literature only in mesenteric desmoid disease associated to familial adenomatous polyposis [4] and in a patient with liposarcoma [5].

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