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Late recurrence of low-grade serous carcinoma of the ovary mimicking colorectal neoplasia

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A 65-year-old female patient presented with hypogastric pain, fecal incontinence, and weight loss. Physical examination showed a distended abdomen and a palpable mass in the left lower quadrant. She had a history of ovarian cancer at 40 years of age treated with hysterectomy, bilateral oophorectomy, and chemotherapy – further details, including histologic diagnosis, were not available.

Computed tomography (CT) scan identified in the pelvis a heterogeneous hyperdense expansile lesion measuring 12.5 × 6.7 × 6.2 cm, without cleavage plane with sigmoid colon and intraperitoneal rectum, and anatomically deforming them (Figure 1).

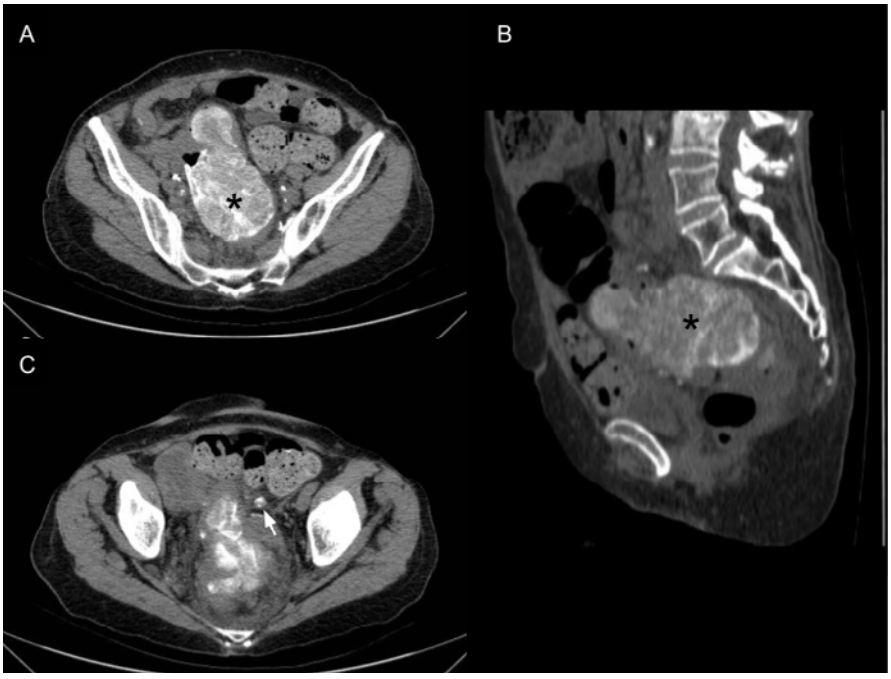

Figure 1: Unenhanced pelvic CT. A: Axial; B: sagittal planes showing a heterogeneous hyperdense expansile lesion (*) without cleavage plane with sigmoid colon and intraperitoneal rectum, and anatomically deforming them; C: Similarly hyperdense nodules (arrow) were also identified on the peritoneal surface of the pelvis.

The lesion was extensively calcified, limiting the evaluation of contrast enhancement pattern. Smaller and similarly hyperdense nodules were also identified on the peritoneal surface of the pelvis.

Magnetic resonance imaging (MRI) showed the large expansile mass in close contact with the intraperitoneal rectum, extending to the rectosigmoid transition and occupying most of the mesorectum, narrowing the intestinal lumen without signs of significant obstruction. The lesion had predominantly intermediate T2 signal with a halo of T2 hypointensity, corresponding to the CT calcified component. No mesorectal lymphadenopathy was identified. Post-gadolinium imaging

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showed heterogeneous enhancement confirming the solid nature of the lesion (Figure 2).

Colonoscopy was unable to be completed due to the reported injury. Additionally, serum CA-125 was elevated: 65 U/mL.

The patient underwent exploratory laparotomy with *en bloc* resection of the tumor and the affected large intestine. Grossly, the lesion consisted of a pale-colored solid mass, with hemorrhagic areas, protruding inside the colon, likely originated from the mesocolon and mesorectum. Histological analysis showed epithelial neoplasia with papillary architecture and numerous psammoma bodies in the intestinal wall and mesocolon (Figure 3).

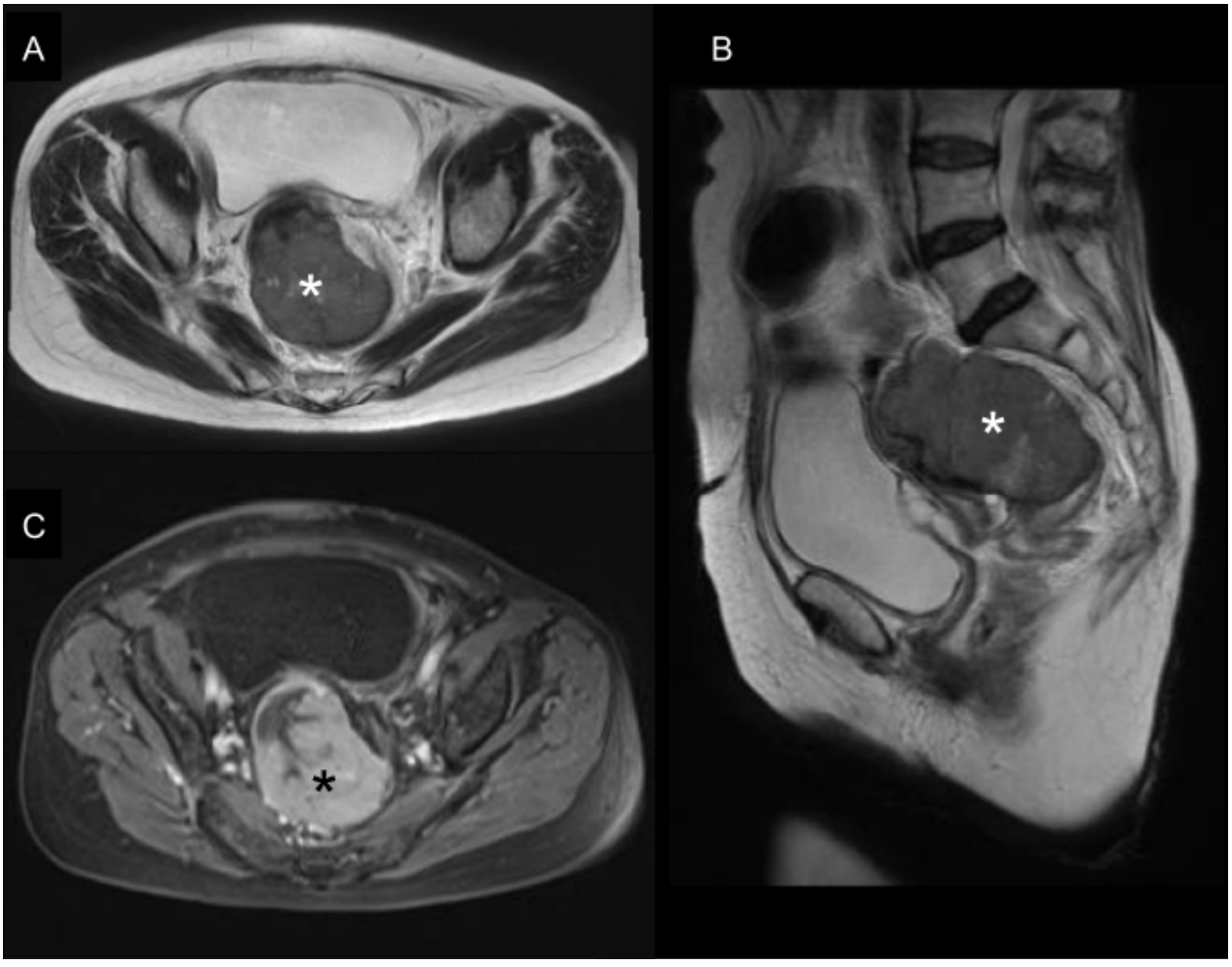

Figure 2: Pelvic MRI. A: Axial; B: Sagittal T2-weighted planes showing the lesion (*) with predominantly intermediate signal intensity with a halo of hypointensity; C: Post-gadolinium imaging showing heterogeneous enhancement confirming the solid nature of the lesion.

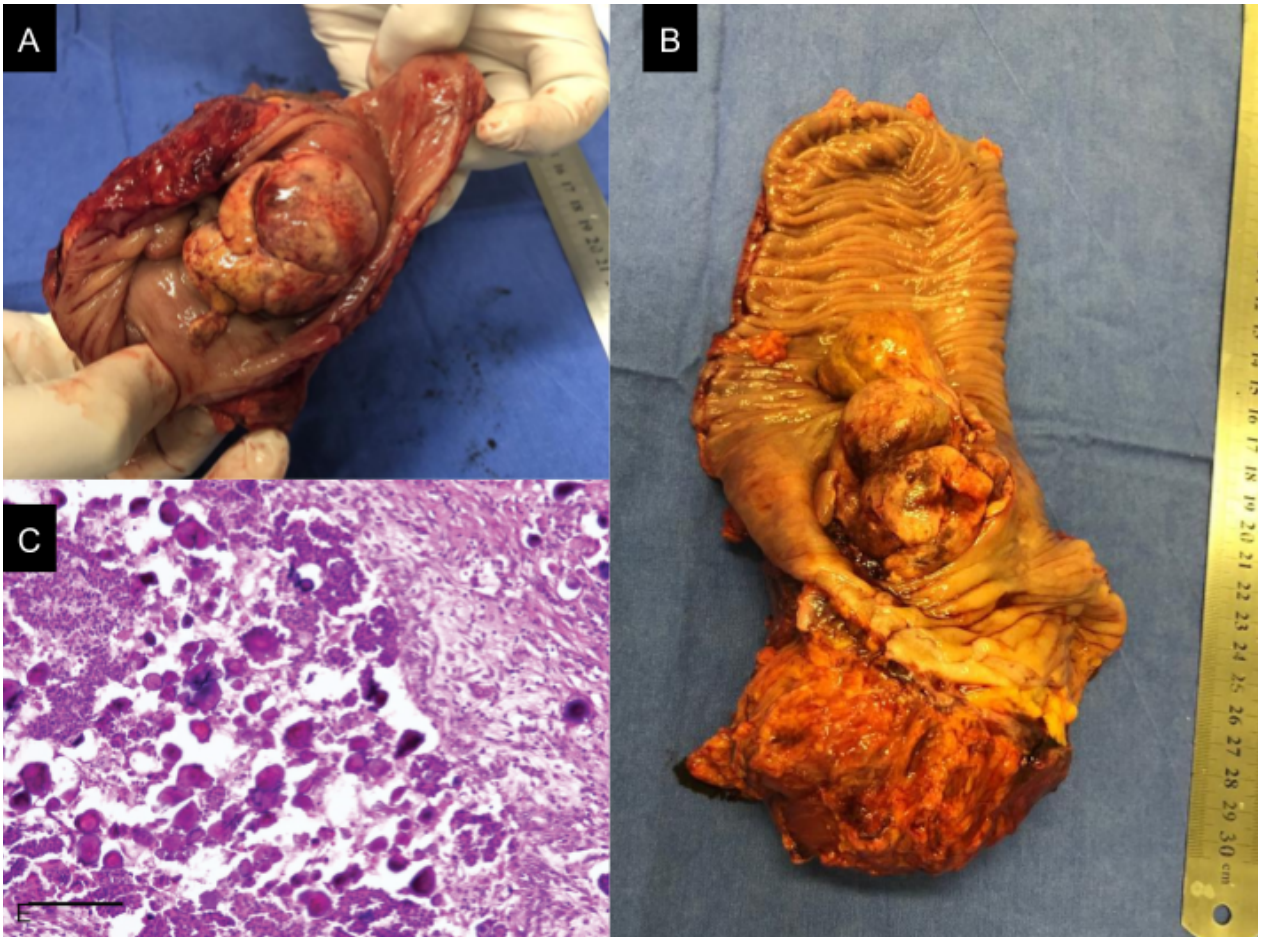

Figure 3: A, B: Gross view of the pale-colored solid mass, with hemorrhagic areas, protruding inside the colon, likely originated from the mesocolon and mesorectum; C: Microscopic view showing numerous psammoma bodies.

There were foci of necrosis and suppuration, extensive lymphovascular invasion and metastasis in 4 mesocolic lymph nodes present in the tissue sample. The immunohistochemical profile was compatible with low-grade serous carcinoma (LGSC) of the ovary.

LGSC is an uncommon malignancy, accounting for 3-10% of the ovarian serous neoplasms[1]. It is an insidious carcinoma that slowly progresses from precursor lesions (a stepwise sequence from cystadenoma to serous borderline tumor to atypical proliferative serous tumor and finally to LGSC)[2]. It can have different gross presentations, such as a solid, cystic-solid, or complex cystic mass[3]. The presence of calcifications is common, and their extent has been related to disease progression. A study of a series of 53 patients with a diagnosis of ovarian LGSC showed that 29 (56%) had psammoma bodies on histological analysis without meeting the definition of psammomacarcinoma[3]. A feature that can distinguish LGSC from benign entities is the presence of nodal calcification along a calcified adnexal mass, especially in the absence of an infectious or inflammatory etiology[1]. Additionally, it has been shown that ascites is not a prominent finding in patients with LGSC, even in the presence of peritoneal masses[1,3].

Most cases of ovarian LGSC recurrence have been reported within the first 5 years and, until 2014, only 5 cases of very late recurrence (more than 20 years after the original diagnosis) were described[4]. A previous study showed a higher recurrence risk in cases presenting with ovarian surface involvement and capsular rupture, or with residual disease after surgery[5]. The present report demonstrates an unusual finding of late recurrence of ovarian LGSC diagnosed 25 years after treatment, mimicking colorectal neoplasia. Therefore, we highlight that, in the setting of ovarian LGSC, calcified lesions on the peritoneal surface should warn about the possibility of disease progression or recurrence[3].

CONFLICTS OF INTEREST

The authors declare no conflicts of interest.

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