Appendiceal tumour mimicking ovarian malignancy: when to think outside the box

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A 69-year-old woman was referred to the gynaecological oncology team due to vague abdominal pain, lethargy, and appetite loss over the previous month. Tumour markers of carcinoembryonic antigen (CEA) 3.3 micrograms (normal), cancer antigen (CA) 19-9 3U (normal), and CA-125 91 IU/mL (raised) were most suggestive of ovarian malignancy. A computerised tomography (CT) thorax abdomen pelvis scan to look for the cause of the elevated CA-125 showed a right ovarian mass with potential involvement of a dilated appendix and adjacent small bowel. Follow-up magnetic resonance (MR) imaging of the pelvis (*Figure 1*) also showed the presence of this complex right ovarian mass. As a result of the ambiguities in the imaging, despite the normal CEA, exploratory laparoscopy staging was undertaken. The laparoscopy further raised the suspicion of an appendicular tumour, due to a complex tubo-ovarian appendicular mass engulfed by surrounding structures (*Figure 2*). A pre-operative colonoscopy identified one 15-mm sessile polyp present in the ascending colon near the ileocaecal valve, but the appendiceal orifice was clear. The identified polyp was not biopsied.

In a joint gynaecological oncology and colorectal operation, the patient underwent midline laparotomy, *en bloc* total abdominal hysterectomy, bilateral salpingo-oophorectomy and extended right hemicolectomy, with infracolic omentectomy, appendicectomy, and primary anastomosis without diversion. Clear margins were achieved with no residual disease.

Histopathology diagnosis confirmed a low-grade appendiceal mucinous neoplasm (*Figure 3*) and an incidental pT1 N0 adenocarcinoma at the ileocaecal valve (*Figure 4*).

The patient has recovered fully with no relapse of symptoms 1 year post-operation. She will have annual CT scans, tumour markers surveillance, and 5-yearly colonoscopies.

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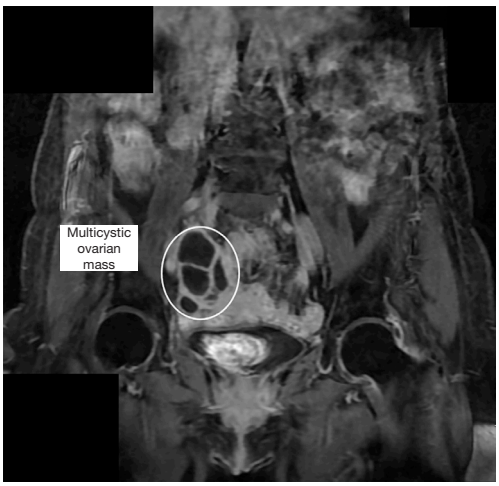

Figure 1 Pelvic magnetic resonance imaging, multicystic right ovarian mass circled.

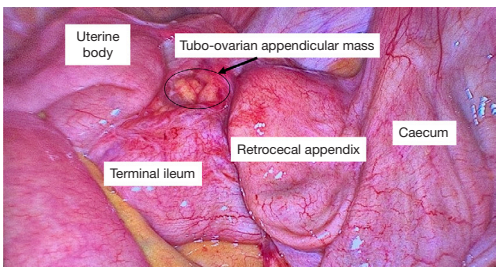

Figure 2 Image taken during diagnostic laparoscopy of a complex tubo-ovarian appendicular mass (location circled). Anatomical plane is coronal towards the right hemipelvis. The mass itself is hidden as it is engulfed by surrounding structures: uterine body, terminal ileum, and caecum. Pouch of Douglas is obliterated.

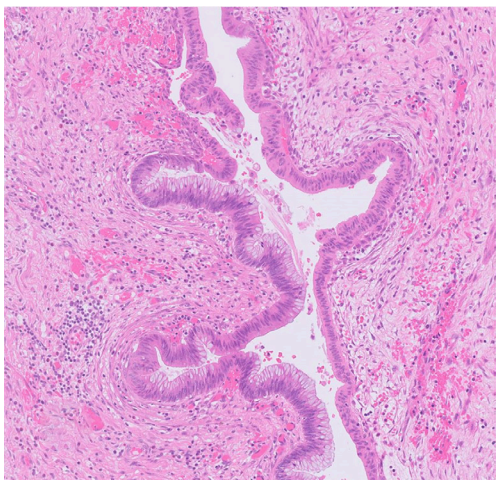

Figure 3 Low-grade appendiceal mucinous neoplasm on microscopy (×10). Haemotoxylin and eosin staining.

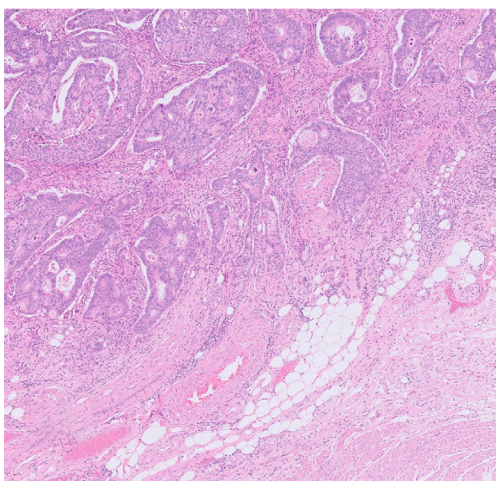

Figure 4 Incidental adenocarcinoma at ileocaecal valve (×5). Haematoxylin and eosin staining.

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Footnote

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Conflicts of Interest: All authors have completed the ICMJE uniform disclosure form (available at https://asj.amegroups.com/article/view/10.21037/asj-22-38/coif). The authors have no conflicts of interest to declare.

Ethical Statement: The authors are accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved. All procedures performed in this study were in accordance with the ethical standards of the institutional and/or national research committee(s) and with the Helsinki Declaration (as revised in 2013). Written informed consent has been obtained from

the patient for publication of this Clinical Picture report and accompanying images. A copy of the written consent is available for review by the editorial office of this journal.

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