Case Review:
Goblet Cell Carcinoma of the Appendix

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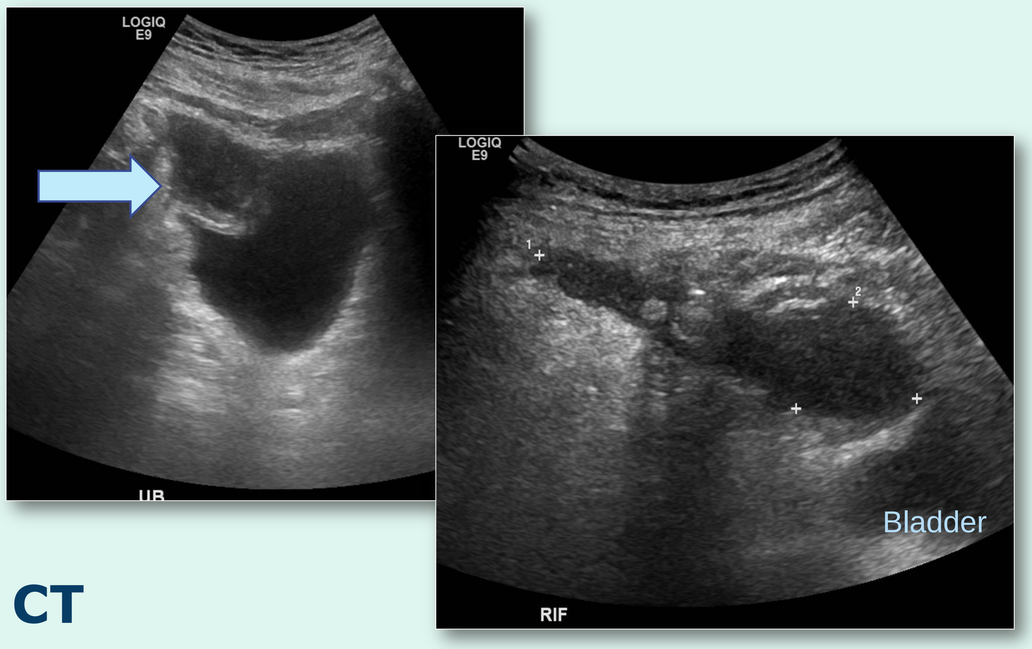
Clinical Background

A 50 year old male presented for an ultrasound of his urinary tract. His symptoms included dysuria, frequency and lower abdominal pains that had persisted for several months. There was no known infective cause. An ultrasound examination had been requested to rule out bladder stones. There was no previous relevant imaging.

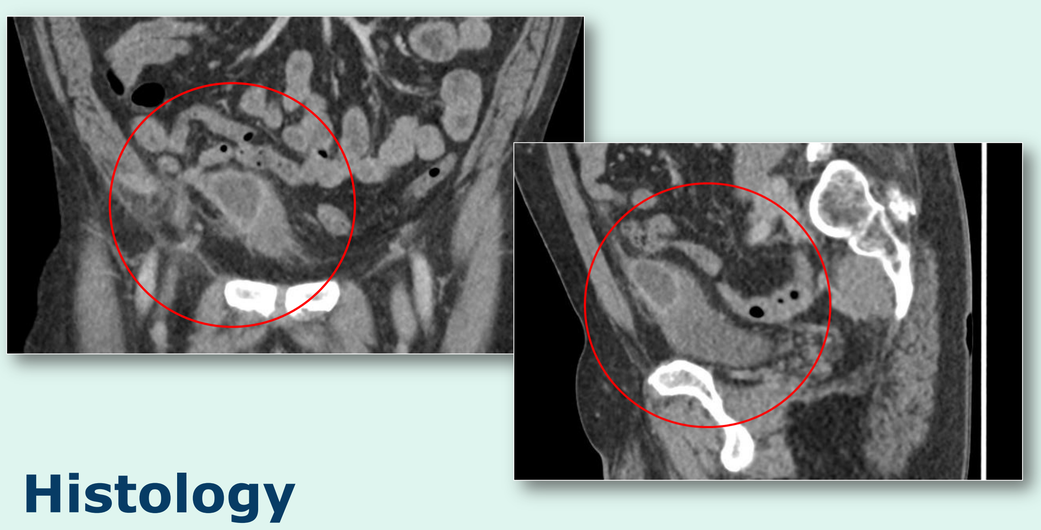
Ultrasound

The patient presented with a full urinary bladder. The bladder has a smooth internal wall and did not contain any bladder stones. Indenting onto the external bladder wall from the right iliac fossa, was an avascular, hypoechoic mass which contained hyperechoic foci. The mass measured 9cm x 3cm x 4cm. A possible diagnosis of colovesical or enterovesical fistual was given. The report was fast-tracked with a suggestion to refer for CT to confirm the findings, or if the patient was unwell, particularly septic, to refer for urgent surgical review without further imaging.



CT

A CT abdomen and pelvis scan with contrast was performed to confirm the nature of the mass. The patient was systemically well, suffering urinary frequency and occasional dysuria. Urine samples were clear of infection. A focal thick walled, enhancing collection related to, and indenting the superior aspect of the urinary bladder was seen. A contiguous, enhancing soft tissue mass tethered and involved the urinary bladder, terminal ileum, distal ileum and appendix in a stellate configuration. The enhancing soft tissue extended to involve the right anterior abdominal wall. No fistula was identified. Appearances of primary appendiceal pathology were present. In view of the enhancing soft tissue mass, surgical excision was advised.



Histology

A diffusely infiltrative Goblet Cell Carcinoma of the appendix.

Goblet Cell Carcinoma of the Appendix

Goblet cells are glandular cells which excrete mucins to protect associated mucous membranes. Goblet cell carcinoma (GCC) occurs when there is excessive proliferation of both goblet and neuroendocrine cells. GCCs are rare and share characteristics with adenocarcinoma and carcinoid tumours, but are more aggressive. They almost exclusively involve the appendix. Goblet cell carcinoma is a rare neoplasm constituting 5% of all primary appendiceal neoplasms. *(Roy and Chetty, 2010; McGory et al, 2005)*

Clinical Presentation

Symptoms often present in 5th & 6th decade. Clinical presentations are varied; most commonly acute appendicitis, pain and palpable mass. Other clinical presentations include bowel obstruction, intussusception and gastro-intestinal bleeding. Female patients often present with suspected ovarian pathology. The number of patients presenting with stage III/IV disease is reported as being greater than 50%. *(Roy and Chetty, 2010; Tang et al, 2008)*

Imaging Findings

Imaging findings include ill-defined nodular thickening of the appendix (most commonly at the tip) with a diffuse pattern of infiltration. The majority of GCCs are greater than 2cm in size and demonstrate longitudinal growth patterns. In 3% of patients with GCC the findings are incidental and often diagnosed following surgical intervention. *(Tang et al, 2008)*

Common sites for metastatic disease include the surface of the peritoneal cavity of the abdomen and pelvis, ribs, vertebrae and lymph. In females, in the region of 50% have ovarian metastases. *(Varisco et al, 2004; Reid et al, 2016)*

Treatment

Treatment requires en-bloc resection, possibly followed by chemotherapy, systemic or hyperthermic intraperitoneal chemotherapy (HIPEC) for recurrent peritoneal disease.

Prognosis

The prognosis is dependant on the stage at which diagnosis is made. In females, ovarian affinity raises the possibility of hormone assisted tumour progression. A study of 77 patients showed a median survival rate of 38 months. (*Reid et al, 2016)*

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