Sister Mary Joseph's nodule

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An 89-year-old woman was referred to a surgical outpatient clinic with a 4-week history of umbilical blood-stained discharge and lower abdominal pain. The umbilical lesion was previously treated as an omphalitis and the patient was given two courses of antibiotics with mild improvement. The patient had no bowel or urinary symptoms.

Her past medical history included hypertension, gastro-oesophageal reflux disease, transient ischaemic attack and a history of bladder carcinoma in situ, which had been treated with intravesical chemotherapy. She was taking omeprazole, perindopril, aspirin and simvastatin.

On examination the patient had a distended abdomen and a brownish red, 3cm firm, fibrous nodule within the umbilicus consistent with Sister Mary Joseph's nodule (Figure 1).

Investigations revealed chronic microcytic anaemia. Tumour marker CA125 was markedly elevated; Ca125: 112.7 U/ml (normal range 0–32 U/ml). A CT scan of the abdomen and pelvis showed a large complex solid-cystic pathological mass

Figure 1 Sister Mary Joseph's nodule, the umbilical lesion of the patient

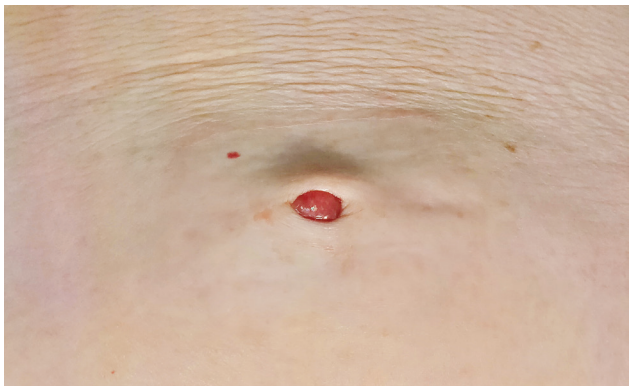
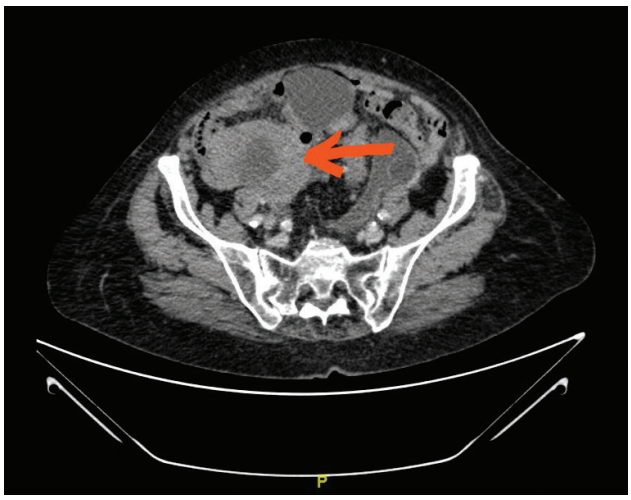


Figure 2 The red arrow points towards a right ovarian mass on CT scan of the abdomen



in the pelvis measuring about 16x16cm which was likely to be within the right ovary (Figure 2). The involvement of terminal ilium in the mass heralded impending obstruction. There were no intra-abdominal or pelvic lymphadenopathy or ascites. The urinary bladder was unremarkable. A CT of the thorax was performed for staging and did not reveal any distant secondary metastasis in the lung.

On laparatomy a friable tumour was seen arising from right ovary, filling most of pelvis. This was irresectable and densely adherent to the posterior aspect of the terminal ileum and caecum with enlarged lymph nodes in the mesentery of the terminal ileum. There were no ascites or peritoneal seedlings. The mass was biopsied, a side-to-side ileocolic bypass was performed, the umbilical nodule was resected and a port-a-cath was inserted. Histopathology confirmed ovarian adenocarcinoma and metastatic ovarian adenocarcinoma from the excised umbilicus (T3N0M1).

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The patient had an uncomplicated postoperative recovery and was referred for oncology review where she received six cycles of carboplatin. Follow-up after three cycles of carboplatin showed an improvement in CA125 levels (71.8 U/ml) and there was a decrease in size of the ovarian mass on follow-up CT scan.

Sister Mary Joseph's nodule is a malignant metastatic umbilical nodule and is a rare physical sign of metastatic abdominopelvic malignancy. The incidence of Sister Mary Joseph's nodule is between 1–3%.[1] Sister Mary Joseph's nodule usually occurs in relation to primary neoplasm of the gastrointestinal (35–65%) or genitourinary tracts (12–35%).[2] Other organ tumour sources include the lungs, pancreas, liver, gallbladder, lymphoma, breast, kidney, penis, prostate, and testicles.[1]

In 30% of patients the source of the primary neoplasm may not be found.[2] This is more frequently encountered in females. The commonest histological type is adenocarcinoma (about 75% of cases), and is more rarely epidermoid, undifferentiated, or carcinoid. It is usually associated with a poor prognosis with a mean survival of 10–12 months.[3]

The mechanism of such tumour spread is not fully understood, but as with other metastatic spread, this could be arterial, venous, or through the lymphatic system or direct extension of tumour through the peritoneum (transcoelomic). This is the most common route for gastrointestinal tumours.[2]

Sister Mary Joseph's nodule is a clinical sign emphasizing the importance of a careful physical examination of the abdomen, thorough investigation of any umbilical lesion, especially in elderly patients, and of histologic diagnosis in case of doubt. The evaluation of an umbilical mass should be directed by suspicion of it being a metastatic lesion. In a patient with a known malignancy, an umbilical mass represents a spread or seeding of the primary tumour and thus could guide therapeutic options.

References

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