Primary umbilical endometriosis
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A 32-year-old woman presented to the surgical outpatient clinic with a six-month history of a painful umbilical lump. Prior to this, she was asymptomatic and had normal umbilical anatomy. She had no prior history of abdominal surgery or laparoscopy. Since first noticing, the lump has increased and decreased in size and she had cyclical bleeding coinciding with her period over the three months prior to presentation. She described two episodes where she developed irritation and erythema at her umbilicus, and she was prescribed antibiotics with no effect. Her medical history was unremarkable, she had never been diagnosed with endometriosis nor had recurrent urinary tract infections. She was a non-smoker, non-drinker and had no significant family history. On examination, she had a soft, non-distended abdomen with no surgical scars and a 3cm diameter lesion protruding from her umbilicus. It was firm to palpate and not clinically a hernia. There was some skin darkening over the lesion (Figure 1).

She proceeded to have an outpatient ultrasound for further assessment. This showed a 26mm subcutaneous solid lesion with internal vascularity at the umbilicus. There was no definite deep extension or evidence of a communicating urachal remnant deep to this (Figure 2).

Figure 1: Pre-operative appearance of the umbilicus.
Figure 2A: Demonstrates a well-defined mass superficial to and not involving the fascia, within the subcutaneous tissue at the umbilicus.

Figure 2B: Demonstrates internal vascularity of the mass.
Above histological specimens show a dermal/subcutaneous lesion comprising of endometrial glands, endometrial stroma and fibrosis. Some glands contained haemosiderin and fresh haemorrhage was also present; features representative of endometriosis. Supplied by Christchurch Hospital Pathology Department.
She proceeded to have an elective excision of the umbilical mass. An elliptical excision of the lesion was taken with a 5mm margin down to fascia including the anterior rectus sheath and the overlying skin. Post-operative histology showed evidence of endometriosis (Figure 3). Her post-operative recovery was uncomplicated, and she was referred to gynaecology for further management.

**Discussion**

Endometriosis is a benign presence of endometrial tissue outside the endometrial cavity, and it affects 10–15% of all women of reproductive age. Extrapelvic endometriosis represents 1% of all endometriosis deposits; common places include the bowel, peritoneal cavity, lung and cutaneous sites (primary or surgical scars). Of this small proportion, only 0.5–1% of patients have primary umbilical endometriosis (PUE). Of all cutaneous endometrial sites, umbilical endometriosis is the most common, although most relates to previous surgical incisions (30–40%). PUE is rare, and in a case report by Van den Nue et al, the authors describe that since 1990, less than 100 cases of PUE have been reported. Originally described in 1886 by Villar, it is often referred to eponymously as a Villar’s Nodule.

Primary umbilical endometriosis may present rarely with an umbilical lump, often with cyclical bleeding in a patient without a history of endometriosis. The exact pathogenesis remains unknown; however, it has been hypothesised that Müllerian remnants from the umbilical fold that have failed to properly differentiate or migrate can form extrapelvic endometriosis deposits. Alternatively haematogenous or lymphatic spread of endometrial cells has been proposed as a cause.

Umbilical endometriosis more commonly occurs secondarily, usually caused by ‘iatrogenic seeding’ during surgery causing a spread of endometrial tissue from the pelvis to a surgical scar. Despite being more common than PUE, the true incidence is not known.

Radiological findings are non-specific and there are no pathognomonic imaging findings characteristic of PUE. Imaging in the form of CT, USS or MRI may be employed when assessing an umbilical mass, and their main use lies in the exclusion of other diagnoses such as a hernia or urachal remnant. Fine needle aspiration (FNA) cytological analysis may be useful to confirm the diagnosis after imaging confirms a solid mass and prior to surgical excision. Histological findings typically are of hypervascularity surrounding metaplastic endometrial glands and cytogenetic stromal fragments in the deep and middle dermis with possible haemorrhagic and haemosiderin filled macrophages. Surgical excision is widely accepted as standard treatment, however, there is no consensus on whether a laparoscopy should be performed concurrently in the absence of abdominal or pelvic symptoms. Surgery should preferentially be performed at the end of the menstrual cycle when the endometrioma is as small as possible. Recurrence rates are low.
Competing interests:
Nil.

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REFERENCES:


3. The WT, Vollenhoven B and Harris P. Umbilical endometriosis, a pathology that a gynaecologist may encounter when inserting the Veres needle. Fertility and Sterility. 2006; 86(6).


