



International Journal of Nephrology and Urological Disorders

Case Report

Abdominal Wall Endometrioma: A Case Report of The Clinical Presentation, Imaging Features, and Diagnosis.

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Abstract

The presence of functional endometrial tissue outside the endometrial cavity is defined as endometriosis. Although uncommon, endometrial tissue can become implanted into the abdominal wall musculature to form an endometrioma. Diagnosis is usually confirmed if there is the typical history of a mass in the abdominal wall after gynaecological surgery with symptoms that accompany menstruation. Tissue sampling confirms the histological diagnosis, but various imaging modalities (ultrasound, CT and MRI) can be used to further characterize and delineate these lesions. Herein we report the case of an abdominal wall endometrioma which was evaluated by various imaging modalities and eventual histological diagnosis was established by tissue sampling with ultrasound guided core needle biopsy.

Keywords: Endometriosis, Endometrioma, Caesarean Section, Abdominal Wall Mass, Rectus Abdominis Muscle, Ultrasound Guided Biopsy

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Citation: Fidel Rampersad et al. (2018). Abdominal Wall Endometrioma: A Case Report of The Clinical Presentation, Imaging Features, and Diagnosis. *Int J Nep & Uro Dis*, 2:1,01-05

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Received: December 28 2017, **Accepted:** January 12, 2018, **Published:** January 31, 2018

Abbreviations

CT: Computed Tomography; MRI: Magnetic Resonance Imaging, C-section: Caesarian section

Background

During gynaecological surgery, endometrial tissue can be introduced into the surgical wound. This condition is relatively uncommon but has been well described by numerous authors. The incidence between diagnosis and procedure varies but has been reported to occur between 4.5 years to 5.72 years, with some series even reporting it as early as three months after the surgical procedure [1].

Without the classical symptoms of a palpable mass and cyclical pain, this condition is commonly missed. Imaging modalities, including ultrasound, CT and MRI, may help in the differential diagnoses but their use is limited. Tissue sampling with ultrasound guided core biopsy provides a rapid diagnosis and excludes malignancy [2].

Medical management with hormonal therapy has not shown to be of consistent benefit and recurrence is common on cessation of

treatment [3]. Wide local excision remains the treatment of choice.

Case presentation

A 36-year-old female presented to her Gynaecologist with severe left sided abdominal pain. The pain was localized to the left of the umbilicus and described as being 9/10 in severity. She experienced pain twice monthly and it usually lasted for a few days.

She has a past medical history of fibroids and four miscarriages. Her past surgical history included a Caesarean section one year prior.

Abdominal examination revealed an abdominal wall mass located laterally to the left of the umbilicus. She was subsequently referred for imaging.

Ultrasound images gathered using a high frequency linear transducer (Figure 1) revealed a well circumscribed, hypoechoic, heterogeneous, ovoid mass, in the midline infra-umbilical anterior abdominal wall, deep to skin and subcutaneous tissue, with no intra-abdominal extension. The mass was within the left rectus abdominis muscle and showed no

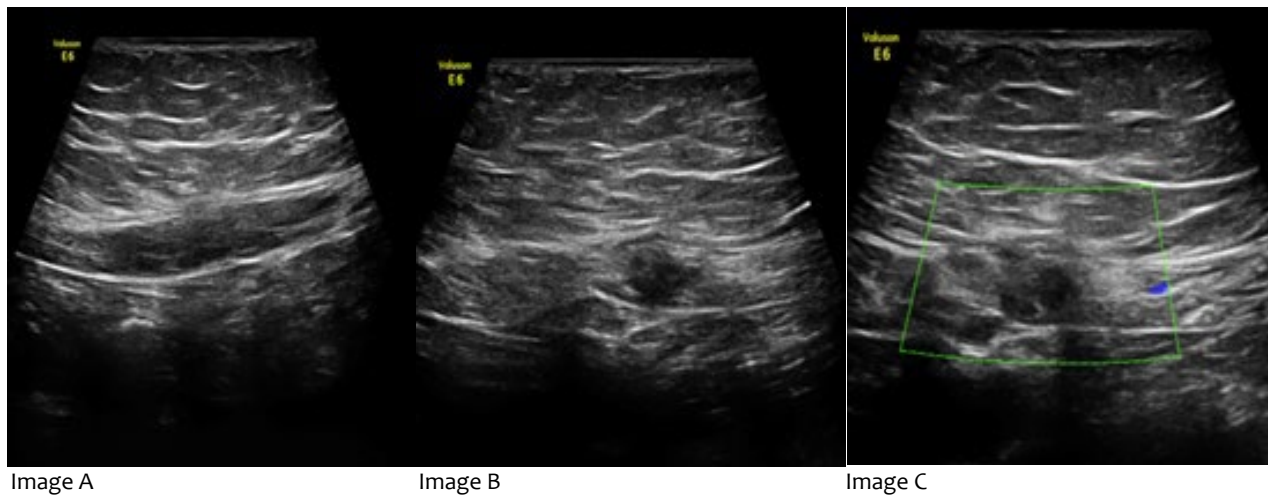


Figure 1: Initial ultrasound images (Images A, B&C) showing a hypoechoic heterogeneous mass in the left rectus abdominis muscle, with no intraperitoneal extension and no appreciable blood flow.

A non-enhanced CT of the abdomen and pelvis (Figure 2) was

subsequently done which showed an area of hypodensity in the medial aspect of the left rectus abdominis muscle abutting the linea alba. There was no intraperitoneal extension and the overlying fat and remaining anterior abdominal wall were normal.



Figure 2: Axial and coronal CT scan images (Images D&E) showing an ill-defined area of hypodensity in the medial left rectus abdominis muscle.

MRI of the abdomen and pelvis (Figures 3, 4, 5 and 6) was then

performed, and revealed a heterogeneous T1/T2 spindle shaped mass within the medial fibers of the left rectus abdominis muscle, just inferior to the umbilicus. This lesion demonstrated enhancement after administration of intravenous gadolinium.



Figure 3: Axial T1 weighted MRI image (Image F) showing a subtle low signal T1 area of thickening within the medial aspect of the left rectus abdominis muscle.

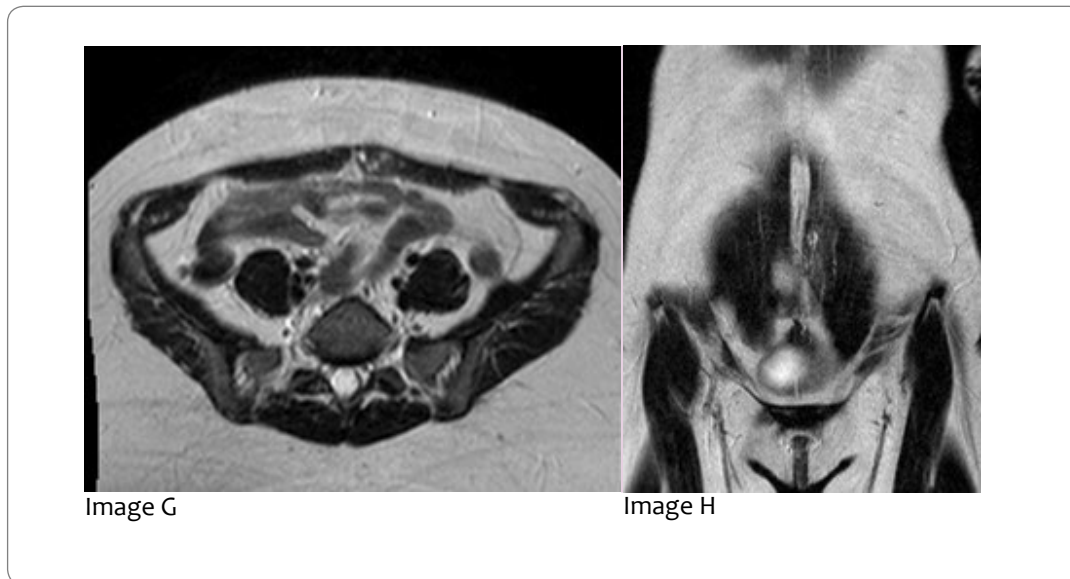


Figure 4: Axial and coronal T2 weighted MRI images (Images G&H) confirming a heterogeneous T2 left rectus abdominis muscle mass, with areas of more focal intra-lesional high T2 signal foci.



Figure 5: Coronal T1 fat-suppressed MRI (Image I) confirms the absence of fat within mass

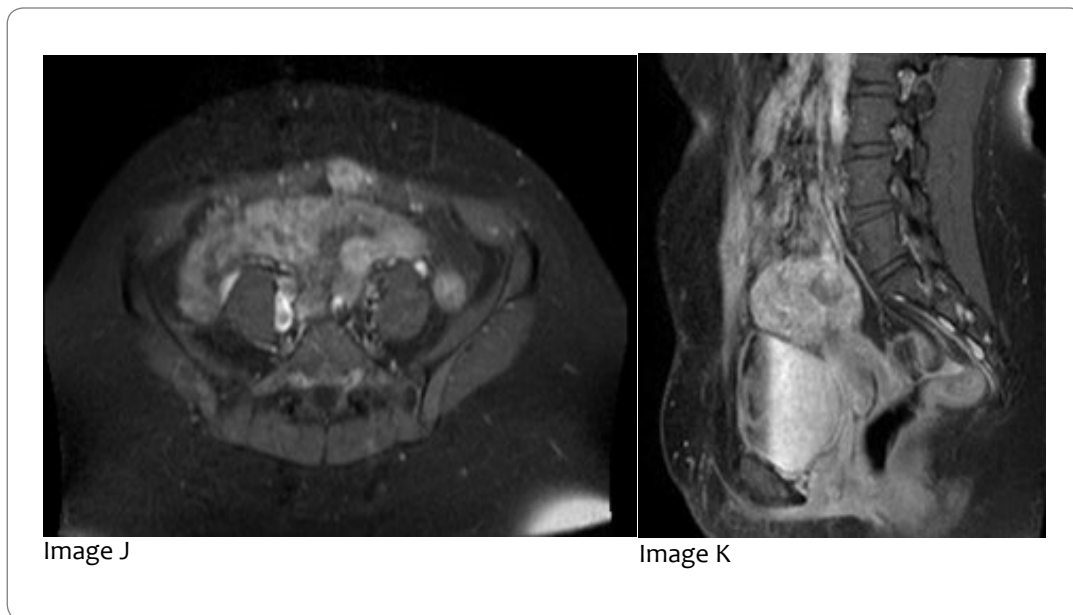


Figure 6: Axial and sagittal T1 fat-suppressed post-gadolinium MRI images (Images J&K) demonstrating diffuse enhancement of the left rectus abdominis muscle mass. Uterine fibroid noted in the sagittal image.

Under ultrasound guidance, the mass was biopsied using a 16-gauge core biopsy needle which confirmed the diagnosis of an abdominal wall endometrioma.

A conservative course of management was undertaken. The patient was placed on medroxyprogesterone acetate (©Depo-SubQProvera) 104mg injections once every three months. Ultrasound examination after the first three months of medical management revealed a reduction in the size of the abdominal wall endometrioma (Figure 7). The patient has also reported a significant reduction in abdominal pain.



Figure 7: Post-treatment sagittal ultrasound image (Image K) showing a reduction in the size of the hypoechoic mass within the left rectus abdominis muscle.

Discussion

Endometriosis is defined as the presence of endometrial glands and stroma outside the uterine cavity. Most commonly it occurs in the pelvis but can also occur at other sites including the bowel, diaphragm, and pleural cavity. Endometrioma is the term given to endometriosis when it forms a discrete mass. Localization to the anterior abdominal wall is extremely rare and occurs in 1.08-2% of cases following hysterectomy and 0.03-0.4% after cesarean section [4]. The pathogenesis involves the transplantation of endometriotic cells into the wound during surgery and their stimulation by estrogen [5].

Abdominal wall endometriomas typically present as a tender or painful mass near an incisional scar. Cyclical pain which corresponds to menstruation may be present. Sometimes, it can present as a painless expanding mass [6].

In the absence of the pathognomonic history, the diagnosis can be difficult. Some differential diagnoses include abscess, incisional hernia, hematoma, lipoma, suture granuloma, sarcoma, desmoid tumor, lymphoma, or metastatic disease [6].

Noninvasive imaging modalities including ultrasound, CT and MRI can help with diagnosis, but current literature lists ultrasound guided tissue sampling as a means of rapid, accurate, preoperative diagnosis [2]. Medical management with the oral contraceptive pill, gonadotropin-releasing hormone analogs and progesterone have shown limited success with a high recurrence on cessation of treatment. Wide local resection with clear margins is diagnostic and therapeutic and remains the mainstay of treatment [3].

Patients usually have a good prognosis unless excision is incomplete. Malignant transformation is rare but has been reported in 0.3% to 1.0% of cases [7].

Acknowledgments

I would like to acknowledge the staff at Alexandra MRI, Eric Williams

Medical Sciences Complex and Caribbean Radiology Limited for their help in the acquisition of the images for this case report.

Consent

Patient consent was obtained

Funding

No funding was required for this case study.

Competing and Conflicting Interests

There was no competing and conflicting interest.

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