



Giant Peritoneal Inclusion Cyst in a Patient with Known Deep Infiltrating Endometriosis

R. M. Saad¹, H. Staley¹, M. Kaur¹, D. Marcus¹
1.Chelsea and Westminster Hospital NHS Trust

Introduction:

A giant peritoneal cyst is a rare entity, particularly in patients with known deep infiltrating endometriosis (DIE). This case highlights the diagnostic and management complexities of an atypical presentation in a nulliparous woman with no history of abdominal surgery but significant endometriosis-related pathology, including pulmonary endometriosis.

Case Description:

A 37-year-old woman presented to the emergency department with progressive abdominal pain, increasing abdominal swelling over two years, weight loss, reduced appetite, and general malaise. Initial investigations revealed a raised CA-125 (129 U/mL) and a CT scan showing a 39 cm cystic structure with low attenuation in the anterior abdomen, consistent with a peritoneal inclusion cyst. Interventional radiology drained 15 liters of fluid, with cytology showing hemosiderin-laden macrophages and no malignant cells.

Post-drainage MRI confirmed the presence of deep infiltrating endometriosis with a thick-walled cyst, but the superior margin was not visualized, leaving the cyst's aetiology unclear. Multidisciplinary Team (MDT) discussion concluded there was no suspicion of malignancy, and she was referred to the endometriosis team.

A laparoscopy was attempted; however, the cyst's large size and dense adhesions to the abdominal wall prevented safe entry into the peritoneal cavity.

Laparoscopic exploration of the cyst drained 3.7 liters, and biopsies revealed pseudocystic structures of fibrotic tissue with congestion, hemorrhage, siderophages, and focal cholesterol deposits, consistent with peritoneal loose bodies. There was no evidence of endometrial tissue, dysplasia, or malignancy.

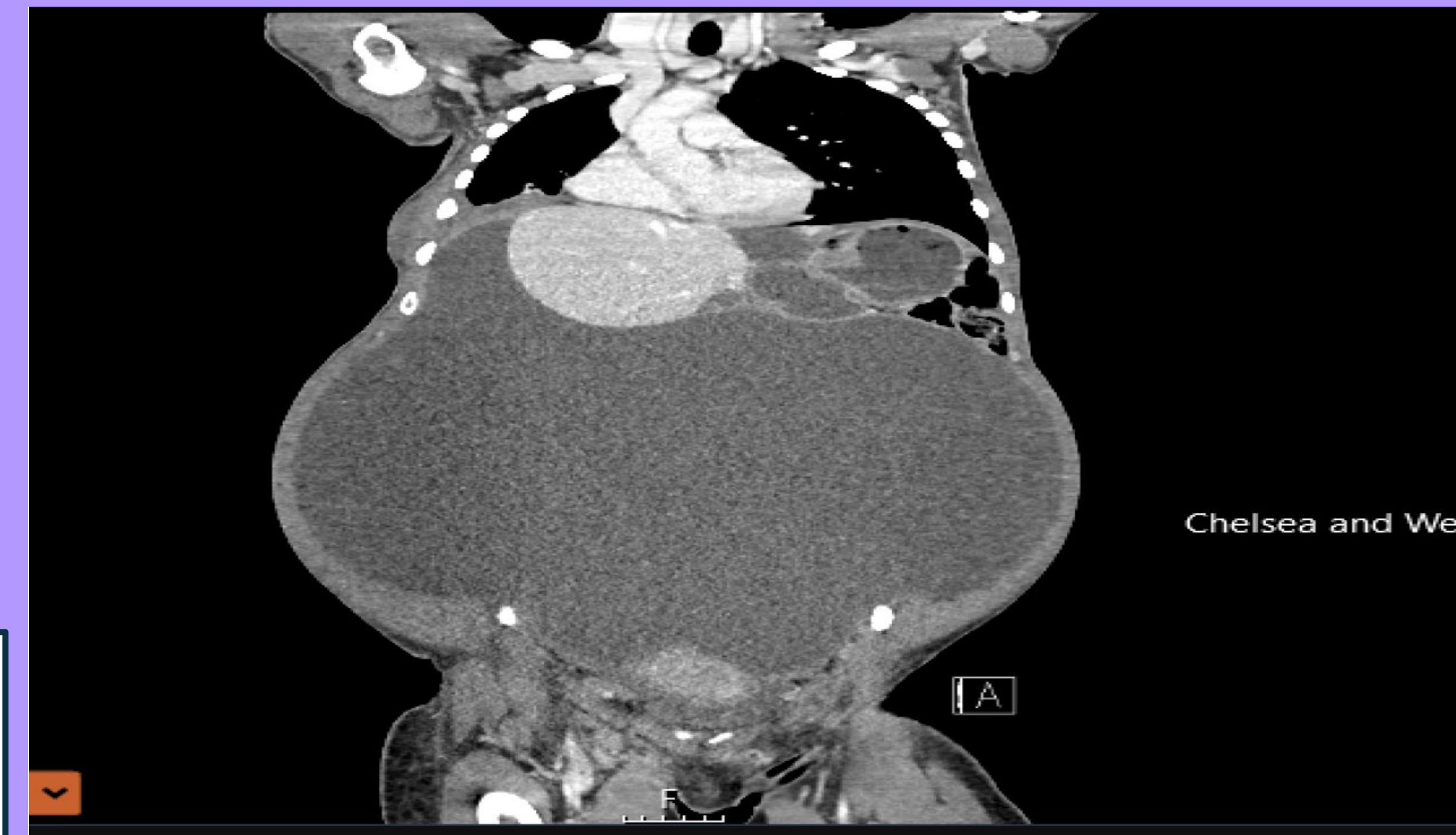


Fig 1 :CT scan showing massive ascites

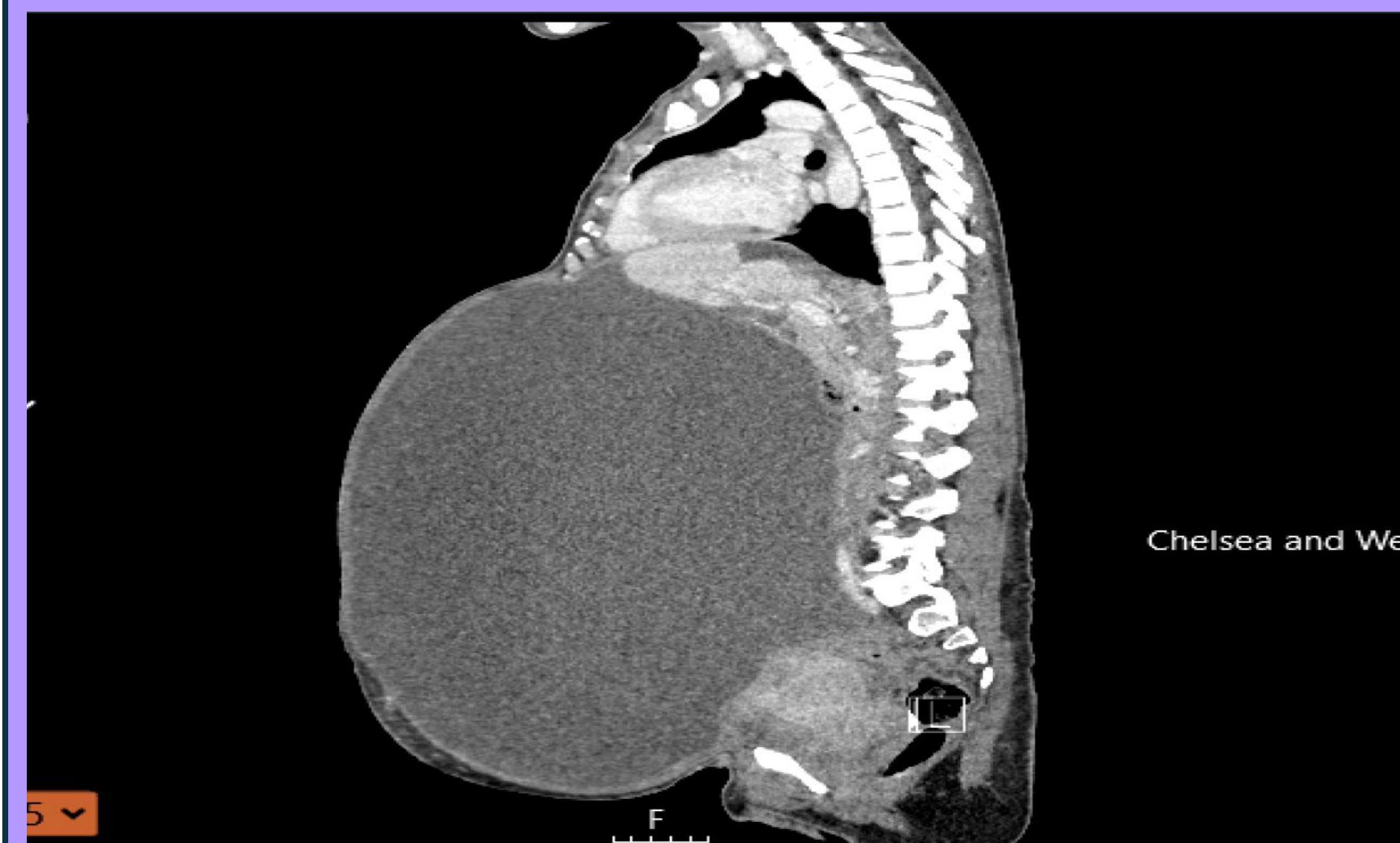


Fig 2: CT Scan sagittal view

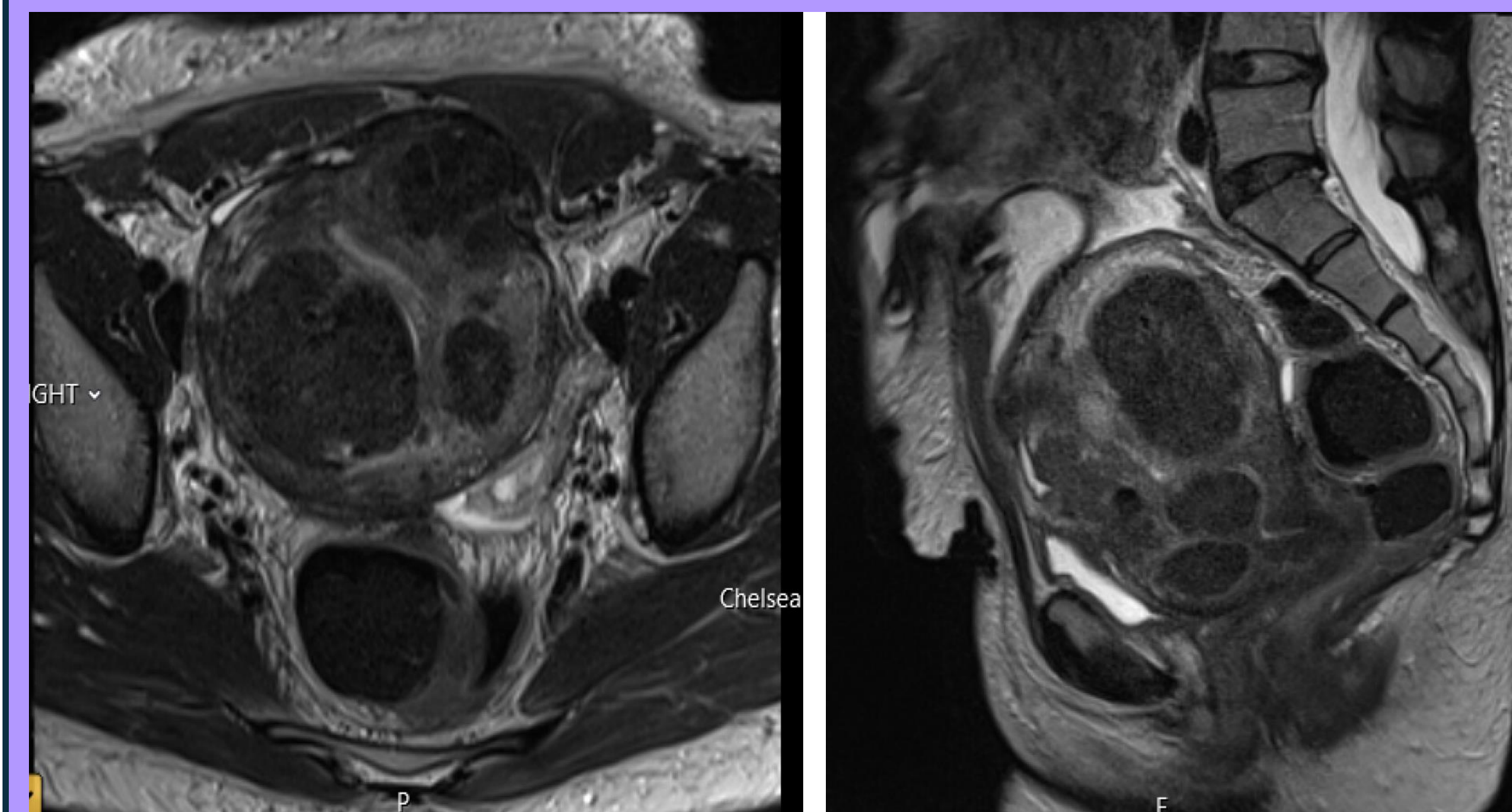


Fig 3: MRI views

Discussion:

This case illustrates the diagnostic complexity of a giant peritoneal pseudocyst in a patient with deep infiltrating endometriosis (DIE) and no prior abdominal surgery. Peritoneal inclusion cysts (PICs) are typically associated with surgical or inflammatory peritoneal injury; however, in this instance, longstanding DIE may have induced chronic inflammation, resulting in cyst formation without typical precipitating factors [1,2].

The absence of endometrial tissue or malignancy on histology and the indolent behaviour aligns with findings from recent studies suggesting that large multilocular PICs often follow a benign course despite their size [3].

The co-existing pulmonary endometriosis underlines the systemic and multifocal nature of DIE, warranting comprehensive MDT evaluation and individualized surgical planning.

Conclusion:

This case underscores the importance of a systematic, multidisciplinary approach in managing rare and complex presentations of cystic abdominal masses in patients with endometriosis. Clinicians should consider peritoneal inclusion cysts in the differential diagnosis of abdominal masses, even in patients without prior surgical history. Laparoscopic exploration, remains critical for diagnostic confirmation and symptom relief.

References

- 1) Natkanska A, et al. *Peritoneal inclusion cysts as a diagnostic and treatment challenge*.
- 2) Kushwaha M, et al. *Endometriosis with peritoneal inclusion cyst: an uncharted territory*.
- 3) Devins KM, et al. *Large and Extensive Multilocular Peritoneal Inclusion Cysts Lack Genomic Alterations and Follow an Indolent Clinical Course Despite Rare Recurrences*.