

Background

Anaplastic carcinoma of the ovary is a rare and highly aggressive malignancy characterized by rapid progression and poor prognosis. It often presents with nonspecific symptoms such as abdominal pain and bloating, leading to delayed diagnosis and advanced-stage disease. Unlike more common ovarian cancers, anaplastic carcinoma may exhibit unusual tumour marker profiles, complicating diagnosis. Limited data exist on optimal management, as these tumours frequently show poor response to conventional chemotherapy. This case highlights the clinical and pathological features of ovarian anaplastic carcinoma, emphasizing the challenges in diagnosis and treatment. Anaplastic carcinoma of ovarian origin is rare with only approximately 40 cases reported in the literature [1]. With such a small number of reported cases, our understanding of the disease remains limited.

Aims

We present a case of a rare case of ovarian anaplastic carcinoma presenting with unusual tumour markers and rapid metastatic progression, emphasizing the need for earlier detection and novel therapies.

Case Report & Discussion

- A 39-year-old woman presented with a one-month history of abdominal pain, bloating and dysmenorrhoea.
- Serum tumour markers revealed mildly elevated CA-125 (43 U/mL) and HCG (8.7 mIU/mL) (*Figure 1*)
- MRI showed a large, complex cystic mass arising from the right ovary, extending above the umbilicus (*Figure 3,4*).
- Initially thought to be a large ovarian cyst with low to intermediate risk of malignancy, due to issues with pain management, she underwent emergency right salpingo-oophorectomy, omental biopsy, and peritoneal washings (*Figure 2*)
- Histology confirmed a high-grade malignant neoplasm consistent with anaplastic carcinoma of the ovary.

- Subsequent CT imaging revealed widespread metastases to the lungs, liver, peritoneum, bones, and ascites. (*Figure 5*)
- No chemotherapy was given due to rapid disease progression and instead, the patient received palliative care.
- Within 12 weeks of the initial presentation, the patient died.

Anaplastic carcinoma of the ovary is a rare, highly aggressive tumour subtype often presenting with nonspecific symptoms, leading to advanced disease at diagnosis [2]. This case highlights its rapid progression and poor prognosis. The elevated CA-125 is common but nonspecific in ovarian malignancies [3]. However, raised HCG is unusual in this tumour type and more often associated with germ cell tumours. Aberrant HCG expression in ovarian carcinoma is rare but has been reported, possibly indicating atypical tumour differentiation [4]. Imaging with MRI and CT is crucial for characterizing ovarian masses and detecting metastases. The large complex mass and widespread disease in this case reflect the aggressive nature of anaplastic carcinoma [5]. Surgery is essential for diagnosis and cytoreduction, but extensive metastases often limit treatment options. Anaplastic carcinoma typically responds poorly to chemotherapy, contributing to poor outcomes [6]. This case underscores the diagnostic challenges and aggressive clinical course of ovarian anaplastic carcinoma, emphasizing the need for earlier detection and novel therapies. It also demonstrates the rapidly aggressive nature of an anaplastic carcinoma of ovarian origin, which for this patient was ultimately fatal.

Conclusion

The relatively asymptomatic nature of this disease makes timely diagnosis and treatment a challenge for clinicians. The limited number of such cases of anaplastic ovarian carcinoma reported worldwide also poses a challenge. Such is the rarity of this case that there is no definitive treatment recorded in any medical literature. This underscores the need for increased research and collaboration in addressing this rare malignancy. Sharing this case highlights the importance of increasing awareness of these cancers and the need for early detection.

Parameter	Value	Normal Range	Units
AFP	<2.3	0 - 5.7	kU/L
CA-125	43	0 - 35	kU/L
CA15-3	26	0 - 26.2	kU/L
CA19-9	18	0 - 34	kU/L
CEA	<1.8	0 - 5.2	ug/L
HCG	8.7	0 - 5.3	iu/L
LDH	141	135 - 214	U/L

Figure : Tumour markers



Figure 2

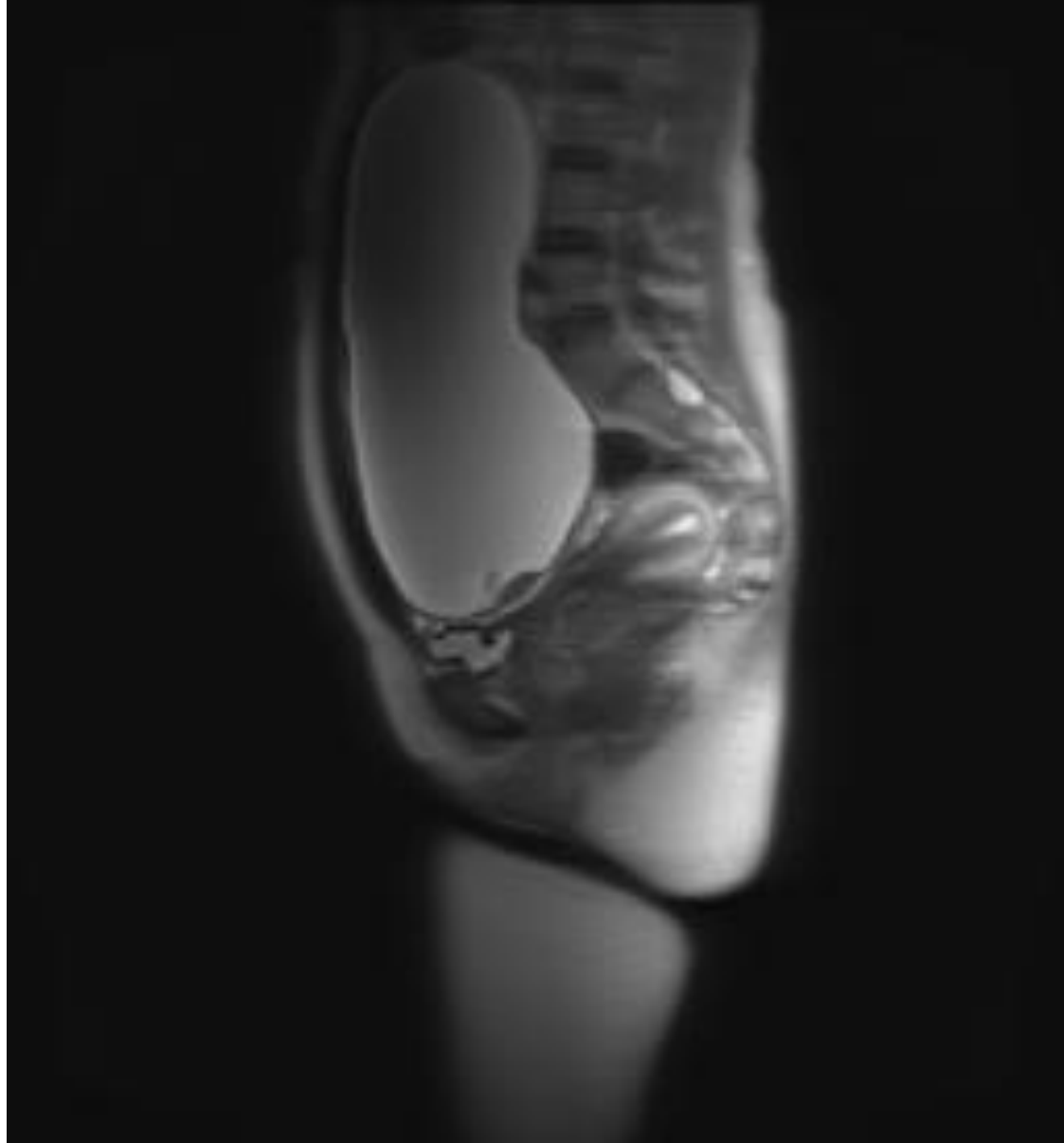
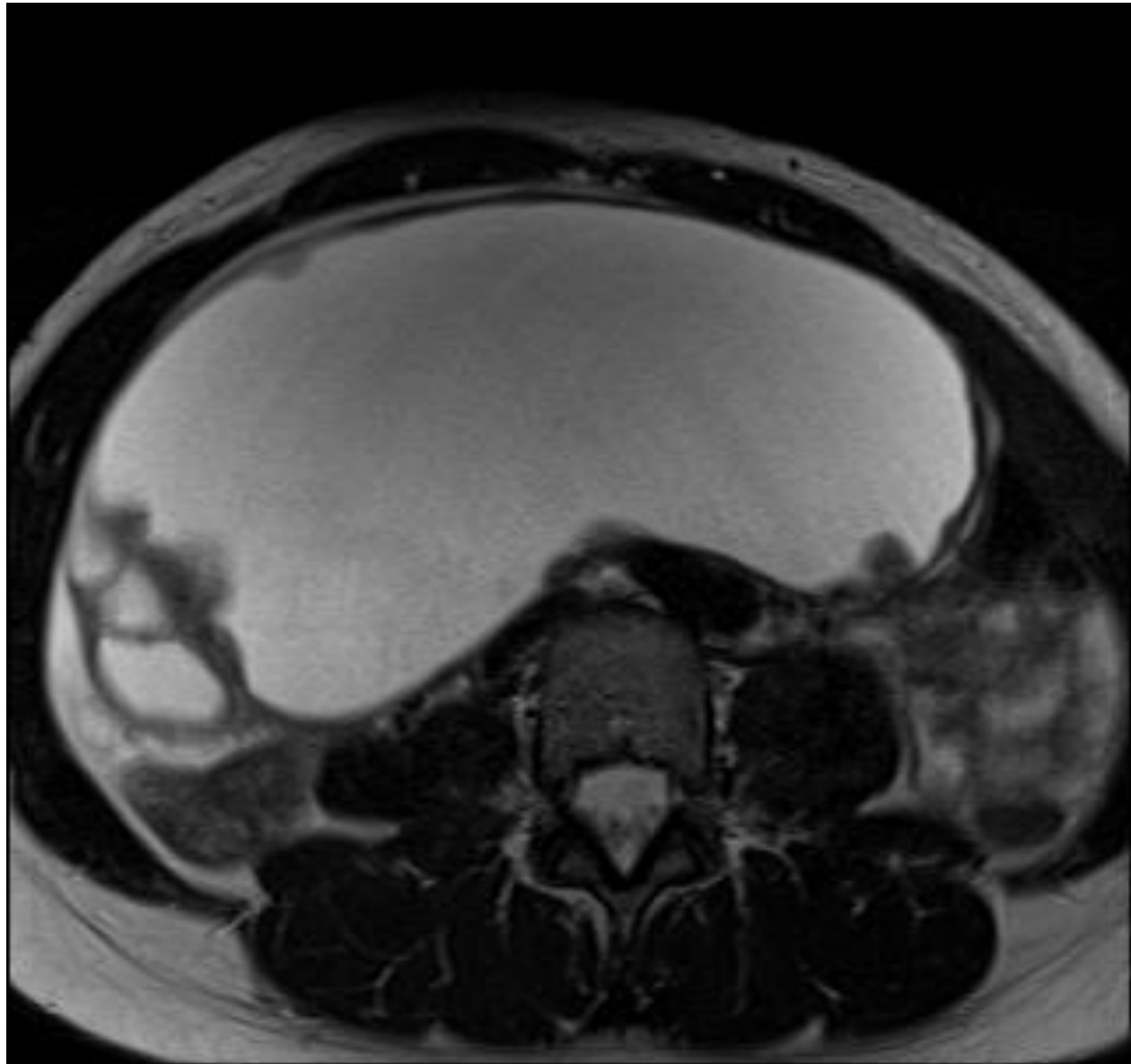


Figure 3,4 : MRI Pelvis

References

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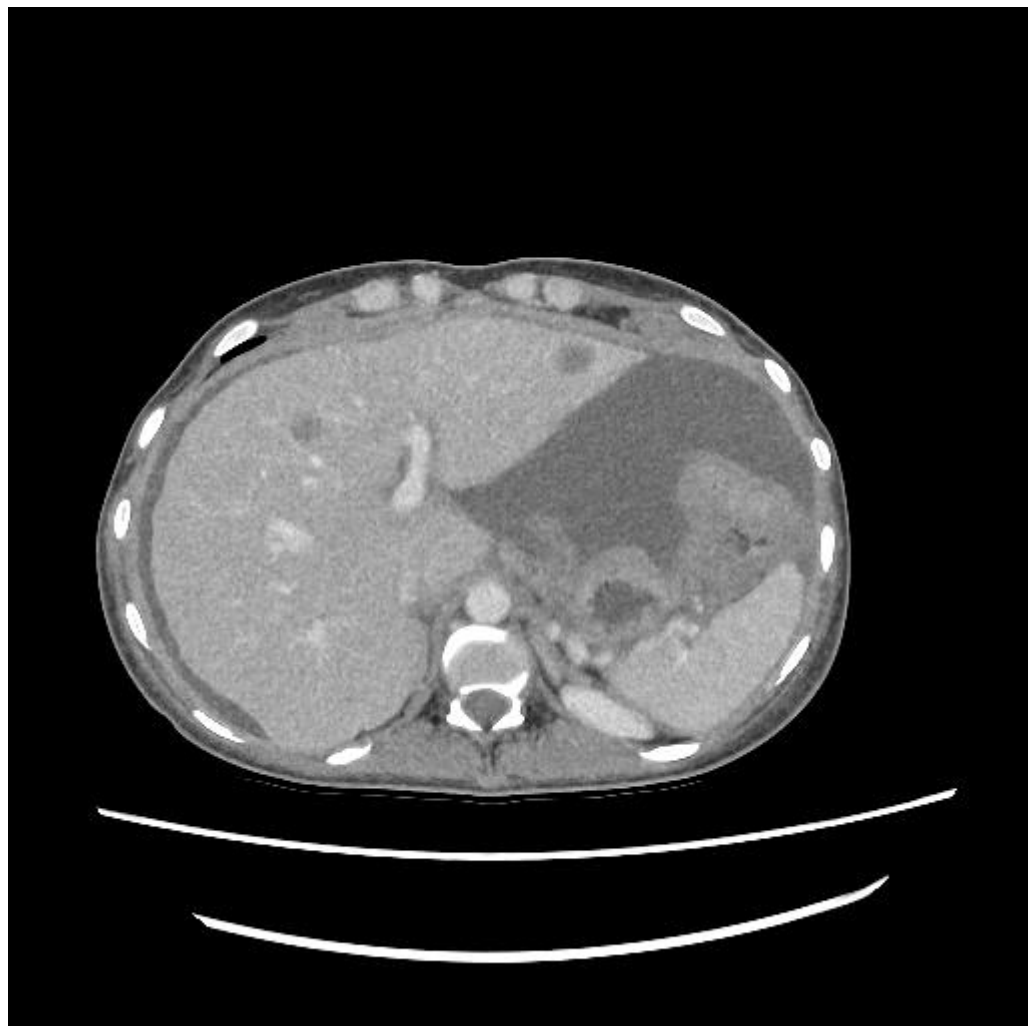


Figure 5: CTCAP