



Unexpected ovarian actinomycosis diagnosed on intra-operative frozen section assessment of a tubo-ovarian mass

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Background

Frozen section plays an important role in the clinical management of ovarian masses, as it allows surgeons to make intra-operative decisions regarding staging procedures by providing rapid histological interpretations of tissue [1]. We report an unexpected diagnosis of ovarian actinomycosis on frozen section assessment in a patient who presented with a suspicious unilateral tubo-ovarian mass.

Case details

A 42 years old female presented with irregular vaginal bleeding and weight loss for 3 months. There was no significant gynaecological history other than the use of an IUD which was removed recently. A solid mass was palpable in the left lower abdomen and MRI revealed a 24x18mm mass in the left ovary with marked enhancement and restriction of diffusion; the appearance of which was highly suspicious for malignancy.

She underwent laparoscopy with intra-operative frozen section assessment which revealed extensive areas of inflammation with the presence of actinomyces. The planned staging procedure was subsequently abandoned, and the patient was treated with a course of antibiotics. Special stains including Gram and Grocott stains highlighted the filamentous bacteria on histology, thus confirming the diagnosis of Actinomycosis involving the left ovary.

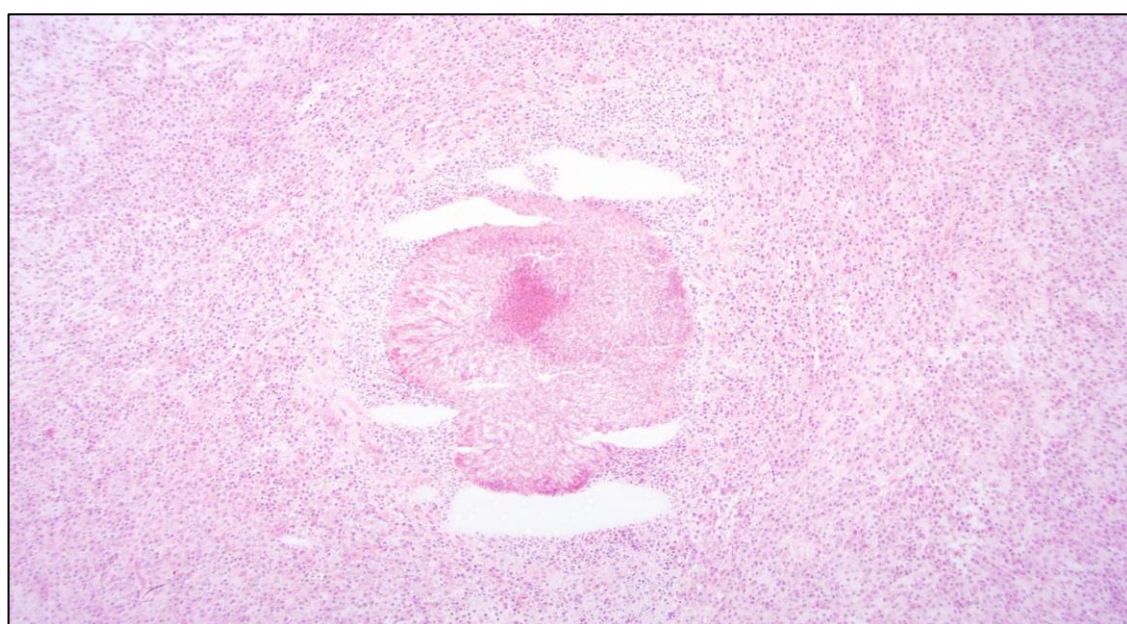


Figure 1. Actinomycotic colonies seen on frozen section (10x)

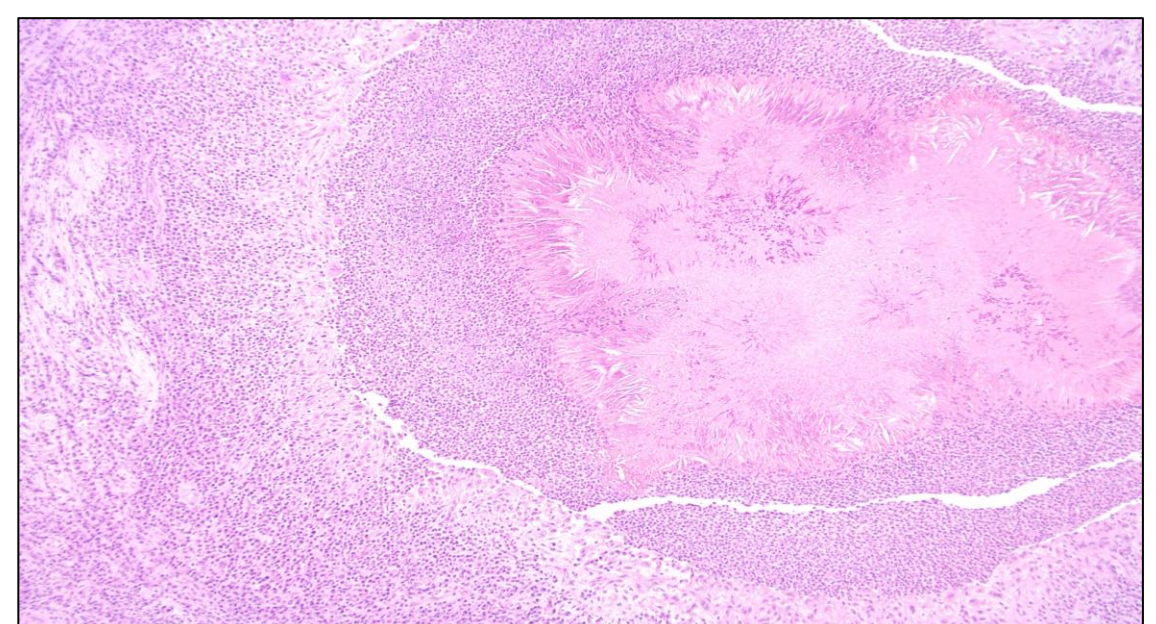


Figure 2. Actinomycotic colonies with acute and chronic inflammation seen on H&E (20x)

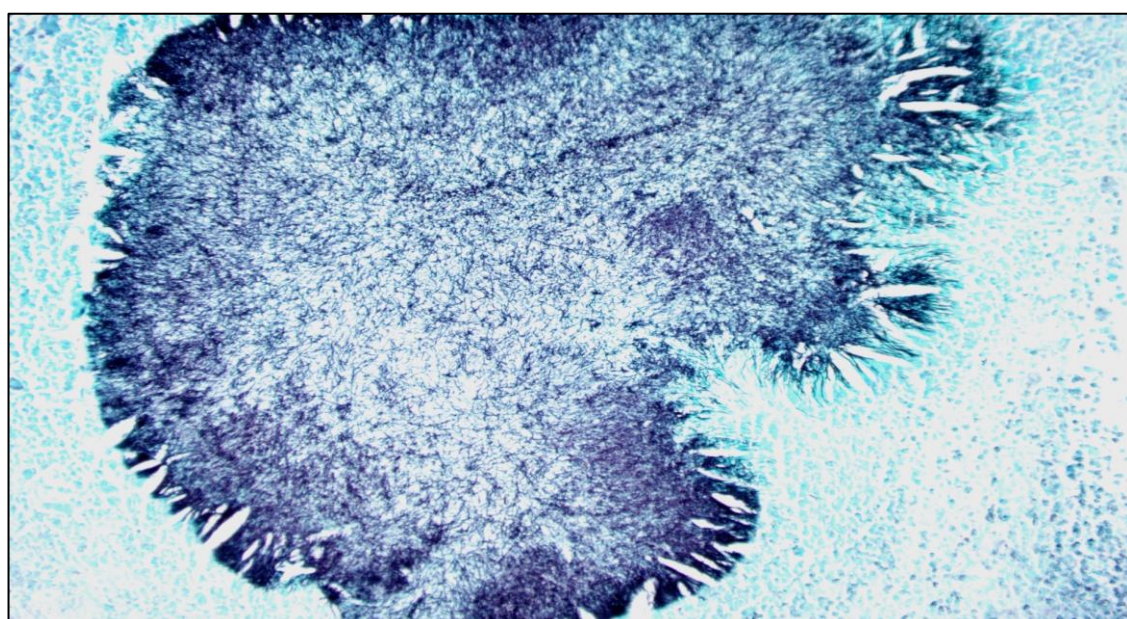


Figure 3. Grocott stain highlighting the actinomycotic sulfur granule (20x)

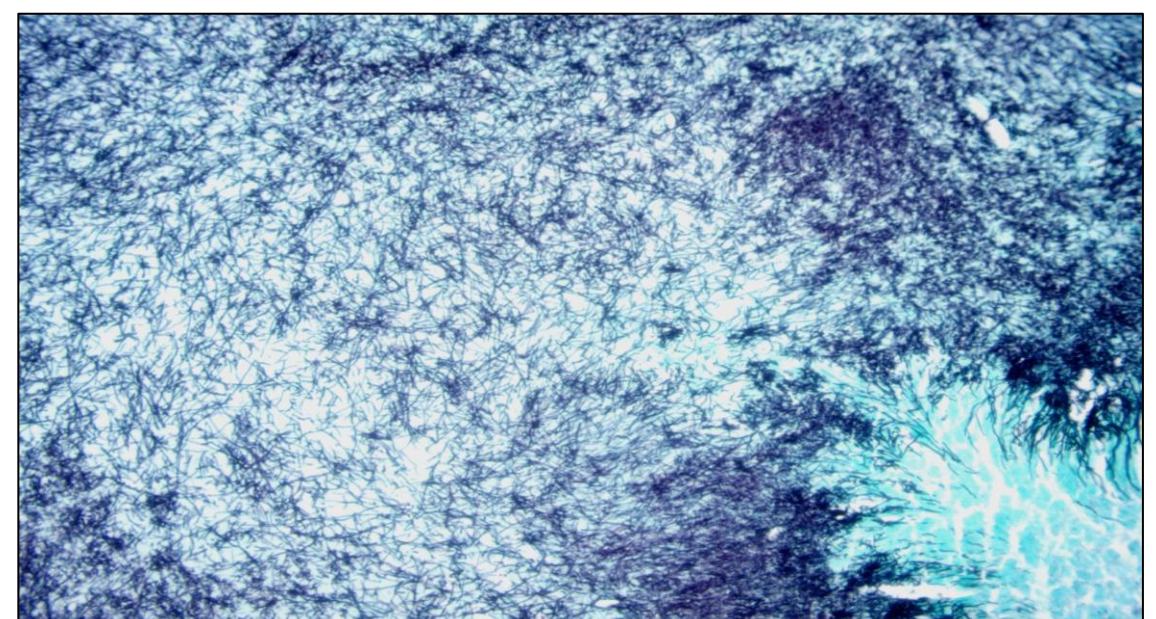


Figure 4. Grocott stain highlighting the radiating filaments (40x)

Discussion

Actinomyces are gram positive, anaerobic bacilli with low pathogenicity, and their association with pelvic inflammatory diseases after prolonged usage of intrauterine devices have been long recognised [2,3]. Endometritis associated to actinomyces is well described and seen in routine practice. However, involvement of the adnexa is uncommon, and it is furthermore rare for such cases to present as a tubo-ovarian mass [3,4].

The clinical diagnosis of tubo-ovarian actinomycosis is challenging. Our patient presented with an unilateral, solid tubo-ovarian mass which was clinically suspicious for an ovarian malignancy. This case demonstrates the value of intra-operative frozen section assessment in managing patients presenting with tubo-ovarian masses, as it allows the construction of informed clinical decisions intra-operatively, which consequently enables the avoidance of unnecessary morbid surgery.

References

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