



Incidental diagnosis of B-cell lymphoma on endometriosis excised for fertility treatment

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BACKGROUND

Endometriosis is a benign gynaecological condition and is one of the leading causes of subfertility requiring fertility treatment. There are multiple treatment modalities including hormonal suppression in women not planning imminently for conception, and surgical ablation or excision of visible disease. There is limited evidence that postulates an association between endometriosis and haematological malignancies, specifically lymphomas. To our knowledge, there is only one other case of diagnosis at time of surgical treatment for endometriosis reported in the literature to date.

CASE

A 41-year-old G0P0 with known endometriosis was referred for management of primary infertility. History included previous laparoscopies for excision of endometriosis and ovarian cysts. Ultrasound was consistent with deep infiltrating endometriosis.

The patient underwent diagnostic laparoscopy, excision of endometriosis and hysteroscopy with endometrial sampling. At this time, stage IV endometriosis involving the pelvic sidewalls, uterosacral ligaments and pararectal space was identified. Anatomy was normalised with adhesiolysis, and peritoneal tissue was excised. Hysteroscopy was unremarkable.

Histopathology revealed extensive patchy endometriosis with a florid lymphocytic infiltrate of the parietal subperitoneal fat; histologically consistent with an extranodal low-grade B-cell lymphoma. Curettings showed proliferative phase endometrium.

Staging bone marrow biopsy was performed with a subpopulation of monoclonal B cells, suggestive of small volume bone marrow involvement. PET revealed increased metabolism in the cortical regions of both kidneys, favoured to represent lymphomatous tissue at this site. There was no identified bowel disease.

The patient was classified as having Stage 4 lymphoma, and she was referred for treatment with Rituximab weekly for four cycles. She remains disease free at interval follow-up.

HISTOLOGY

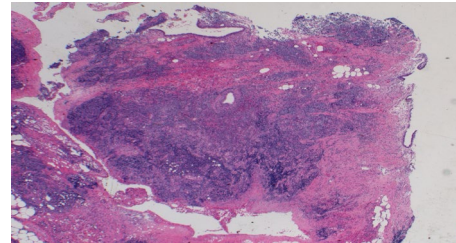


Figure 1 Lymphoid infiltrate around endometriosis

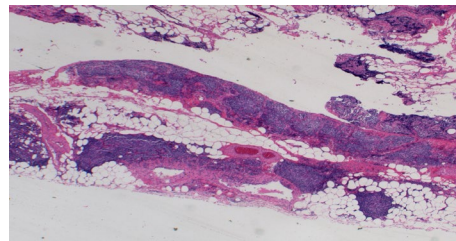


Figure 2 Lymphoid infiltrate in peritoneum

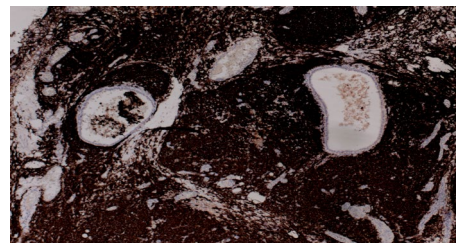


Figure 3 Lymphoid infiltrate with CD 20 staining

DISCUSSION

There are several mechanisms in cellular and molecular biology that drive endometriosis, including hormonally mediated development of endometriotic tissue with dysregulated angiogenesis, cell proliferation and apoptosis.

Interestingly, endometriosis is associated with upregulation of the anti-apoptotic mediator BCL-2, also seen in B-cell lymphomas [1].

Women with endometriosis are at increased risk of ovarian epithelial and breast cancers, and there is growing recognition of the association with haematopoietic malignancies such as lymphoma [2].

It is possible that with increasing recognition and surgical management of endometriosis that the incidence of concurrent haematological malignancies will rise. This is an important consideration in the context of how endometriosis is managed at time of laparoscopy, particularly.

This case may give weight to the value of excision of endometriosis affected tissue for histopathology and tissue diagnosis, rather than ablation therapy.

However, there is a great deal that remains to be understood in the pathophysiology of endometriosis, which no doubt will continue to refine the ways in which this disease is managed.

CONCLUSION

To our knowledge this is the only documented case of B-cell lymphoma diagnosed on peritoneal biopsy. There appears to be biological plausibility that endometriosis and lymphomas may be associated due to the disease processes, however such associations will require further research.

An association between endometriosis and lymphomas may influence recommendations for surgical excision of endometriosis deposits rather than ablative therapy at the time of surgery, and certainly reiterates the importance of histology review of tissue biopsies.

REFERENCES

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