



## Case Letter

## Umbilical endometriosis: When a dermatologist helps diagnose infertility



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Dear Editors,

The umbilicus is the most common site of primary cutaneous umbilical endometriosis, which occurs in approximately 0.4% to 4% of individuals with endometriosis (Victory et al., 2007). Cutaneous umbilical endometriosis typically occurs in surgical scars as a result of the transplantation of endometrial cells during intra-abdominal and gynecologic surgical procedures. Primary cutaneous umbilical endometriosis occurs less commonly and is thought to be caused by multiple potential mechanisms, including vascular or lymphatic migration of endometrial cells, cellular metaplasia of primitive pluripotent mesenchymal cells, retrograde menstruation, and the umbilicus acting as a physiological scar with a predilection for endometriosis (Victory et al., 2007; Yu et al., 1994). We present the case of a patient with primary umbilical endometriosis in the setting of previously unexplained infertility.

A 34-year-old G0P0 woman presented to our clinic with a 4-month history of an itchy, draining umbilical lesion. The lesion bled for approximately 2 to 3 days approximately every 2 to 3 weeks, and these episodes were preceded by periumbilical pain. However, the bleeding did not coincide with the patient's menstrual cycles. Her medical history was significant for unexplained infertility, for which she was seeing a reproductive endocrinologist. The patient was not taking any medications and had no surgical history. Test results for complete blood count, comprehensive metabolic panel, thyroid-stimulating hormone, anti-Müllerian hormone, follicle-stimulating hormone, luteinizing hormone, and dehydroepiandrosterone were all normal.

Upon physical examination, the patient had a firm, brown dermal nodule measuring 9 × 4 mm on the inferior umbilicus (Fig. 1). Punch biopsy showed fibrosis with focally prominent vascularity and hemosiderin and stromal changes consistent with changes peripheral to the endometrial glands (Fig. 2).

Umbilical and pelvic ultrasound were negative. The nodule appeared undetectable, but the area continued to bleed every 2 to 3 weeks after the punch biopsy. Per the patient's obstetrician, her nodule was expected to go into further remission during her anticipated pregnancy, and the patient declined further intervention for her umbilical endometriosis. The patient underwent successful in vitro fertilization and gave birth to a healthy baby. There has been no recurrence of the nodule to date.

An adequate clinicopathologic correlation between umbilical lesions is paramount given the wide range of differential diagnoses, such as congenital malformations, epithelial inclusion cysts, seborrheic keratoses, endometriosis, keloids, dermatofibromas, primary cutaneous malignancy, or metastatic gynecologic or gastrointestinal cancers (Yan et al., 2018). Hormone therapy using danazol, progesterone, or gonadotropin-releasing hormone analogues has been used to treat umbilical endometriosis, but wide local excision of the lesion is most often curative (Victory et al., 2007; Van den Nouland and Kaur, 2017).

This case highlights the important role a dermatologist can play in the diagnosis of endometriosis and, potentially, infertility. Another reported case of umbilical endometriosis diagnosed by a dermatologist, which led to the diagnosis of catamenial pneumothorax in a woman with explained, recurrent, cyclic pneumothorax, further demonstrates the great impact that dermatologic evaluations can have on a patient's overall health status (Mowad et al., 2014).

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**Fig. 1.** Patient at the time of initial presentation with a dermal nodule of the umbilicus.

Umbilical endometriosis is a dermatologic diagnosis with significant implications for a woman's reproductive health. Endometriosis should be part of the differential diagnosis in women with unexplained infertility and an umbilical nodule.

Histopathologic confirmation of endometriosis can potentially reveal this as a contributing factor to infertility.

#### Conflicts of Interest

None.

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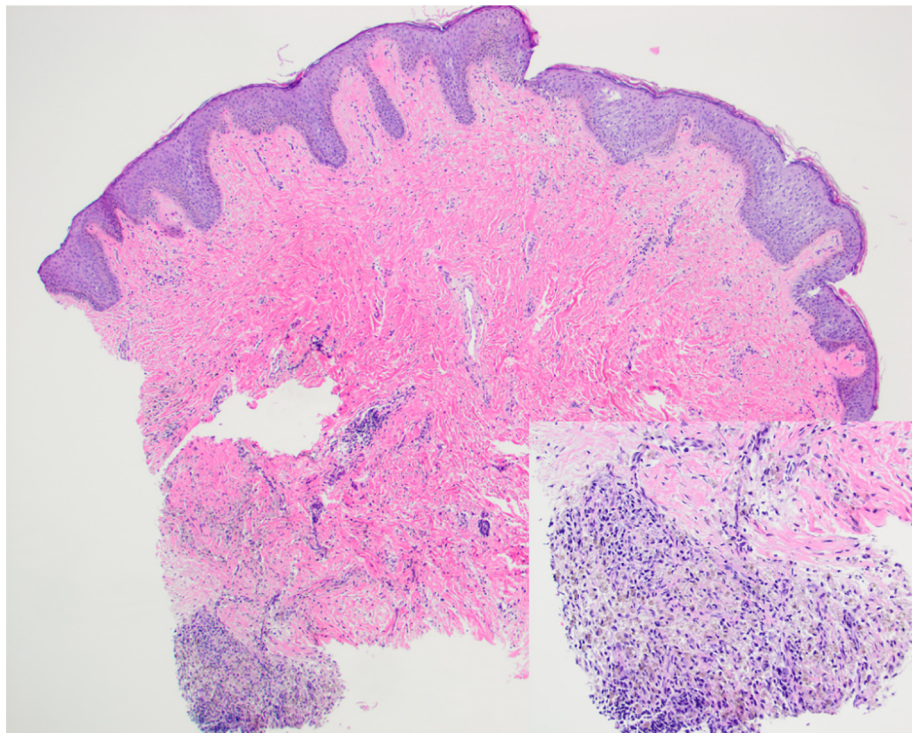
None.

#### Study Approval

N/A.

#### References

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**Fig. 2.** Histology (hematoxylin and eosin) testing, showing 40×/200× magnification of fibrosis with focally prominent vascularity and hemosiderin and stromal changes consistent with changes peripheral-to-endometrial glands.