A rare case of Fallopian tube vascular leiomyoma & Tubal endometriosis camouflaged as a tubal ectopic pregnancy: A case report

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Background:

Vascular Leiomyoma in the fallopian tube is extremely rare and usually asymptomatic. It not only increases the risk of a tubal ectopic pregnancy but can also lead to a misdiagnosis of an ectopic pregnancy in early pregnancy.

Aim:

To report an unusual, rare presentation of fallopian tube vascular leiomyoma, polypoidal endometrioma and fallopian tube endometriosis in a 30-year-old primigravida suspected as a tubal ectopic pregnancy managed with salpingectomy leading to resolution of pregnancy of unknown location with endometrial curetting consistent with secretory endometrium

Case:

A 30-year-old woman, G1P0, with an IVF pregnancy following a single embryo transfer for male factor infertility at 6+ /40 gestation was referred with suspected left tubal ectopic pregnancy with plateauing B-HCG, PV spotting, a left adnexal mass & intrauterine cystic structures on transvaginal ultrasound. Laparoscopy findings of a left tubal mass suspicious of an ectopic pregnancy, small hemoperitoneum and endometriotic deposits was later confirmed on histopathology to be left fallopian tube leiomyoma.

US findings:

Uterus 7.2 x 3.9 x 5.9 cm with 2cm endometrial echo with few fluid containing cysts. Both ovaries appeared normal. Adjacent to the left ovary was a 2.7 x 2.3 x 1.9 cm inhomogeneous mass with medium echogenicity with another 7 x 7 x 5 mm inhomogeneous echogenic area within it with colour flow. There was a small amount of free fluid. This was reported to be consistent with a left sided tubal ectopic pregnancy.

Pathology Findings:

Macroscopic description:

The fallopian tube removed on laparoscopy was in two parts. The medial part measuring 40 mm long and 15mm in diameter had a smooth round lesion 14mm in length. The lateral part of the tube measuring 50mm long and 8mm in diameter had normal appearing fimbria at its lateral end. On sectioning of the tube, there was a 6mm cyst which contained a polypoid lesion.

Microscopic description:

A well circumscribed solid lesion in the fallopian tube and composed of benign, bland, monotonous smooth muscle fibres forming interlacing fascicles. There was no evidence of necrosis, atypia or mitosis. Within the lesion, there were abundant small to medium sized blood vessels. The features were those of a vascular leiomyoma.

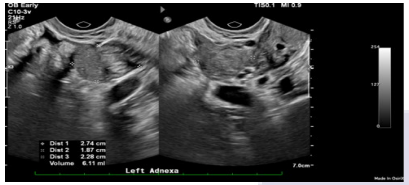

Fig 1: Several cystic structures in the endometrial echo

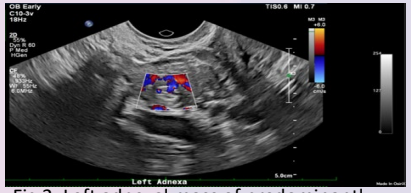

Fig 2: Left adnexal mass of predominantly medium echogenicity

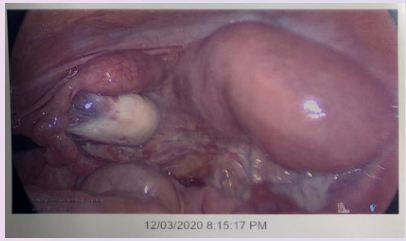

Fig 3: Laparoscopic findings of left tubal mass

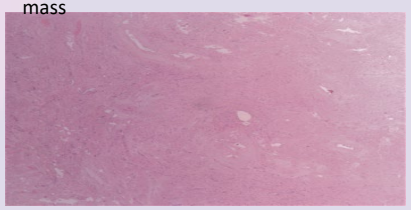

Fig 4: Vascular leiomyoma (H and E, original magnification x 2.5

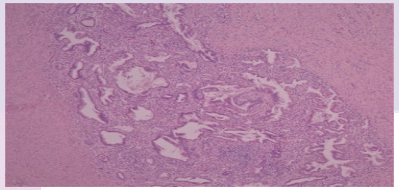

Fig 6: Tubal endometriosis (H and E, original magnification x 2.5)

Immunohistochemistry showed the leiomyoma was positive for Smooth muscle, Desmin and Oestrogen receptor. The proliferation index (Ki-67) was low (1%).

The cystic lesion noted on the second piece was lined by low cuboidal to columnar cells with focal cilia. Within the cyst, there was a 5mm polypoid lesion lined by bland low columnar cells. The stroma, which was extensively decidualised, contained some inactive-looking endometrial-gland like structures. The findings were consistent with polypoid endometrioma. In other area, endometriosis was noted surrounded by proliferating smooth muscle.

Discussion:

Leiomyomas are benign smooth muscle tumours that typically originate in the uterine myometrium. They have an average incidence of 77%, ranging from 40% - 70%. Majority of fibroids are found in uterine myometrium. Rarely they may also be found in the cervix, broad ligament, blood vessels, and other pelvic organs.

Fallopian tube vascular leiomyomas are extremely rare. Literature search shows less than 100 reported cases. They are usually unilateral, small and asymptomatic found incidentally. On Ultrasound they appear as a hypoechoic, solid mass adjacent to the ovary. They may increase the risk of tubal implantation and ectopic pregnancy.

Fallopian tube leiomyoma is usually diagnosed retrospectively on histopathology as majority of them are sporadic and asymptomatic.

In this case, the presence of the left adnexal mass with the plateauing serum B-HCG and no definite intrauterine gestational sac strongly suggested a diagnosis of an ectopic pregnancy. Even at laparoscopy it was thought to be a left tubal ectopic pregnancy, the true diagnosis however was retrospective and based on histopathology. There was no identifiable intrauterine or tubal pregnancy seen in the pathological specimens but the pregnancy resolved after the salpingectomy and endometrial curettage.

Conclusion:

Adnexal masses detected on ultrasound in early pregnancy with a plateauing serum B-HCG strongly suggests an ectopic pregnancy. Fallopian tube leiomyoma is an extremely rare differential which in this case was retrospectively diagnosed.

References:

1. Pelvic Mass. In: Hoffman BL, Schorge JO, Bradshaw KD, Halvorson LM, Schaffer JI, Corton MM. eds. *Williams Gynecology, 3e* New York, NY: McGraw-Hill; Accessed March 26, 2020.
2. Baird DD, Dunson DB, Hill MC, et al. High cumulative incidence of uterine leiomyoma in black & white women: ultrasound evidence. *Am J Obstet Gynecol* 2003; 188(1):100–107
3. Dueholm M, Lundorf E, Hansen ES, et al. Accuracy of MRI and TVG ultrasonography in the diagnosis, mapping, and measurement of uterine myomas. *Am J Obstet Gynecol* 2002; 186(3): 409–415.