

Term Cornual Pregnancy Diagnosed At Elective Caesarean Section

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Definition

Cornual (Interstitial) Pregnancy is a Rare form of ectopic pregnancy (EP), comprising of 2-4% of all EPs[1].

It is defined as an embryonic implantation within the interstitial segment of the fallopian tube.

Diagnosis & Treatment

EP's, which may be located in various sites, typically present in the first trimester with pain and/or bleeding, with an ultrasound showing an empty uterus or pseudosac and sub-optimal β -hcg rise.

Standard treatment after diagnosis may be **expectant, medical** (methotrexate), or **surgical** (laparoscopic salpingectomy)[2].

Left untreated and without surveillance, it may have catastrophic consequences with a mortality rate of 2-2.5%.

Summary

We present the case of a 29-year-old primigravida with a term cornual pregnancy, **which was diagnosed at the time of elective caesarean section**, which culminated in a live birth and good maternal outcome.

This case demonstrates the limitations of second trimester scanning for abnormalities which are typically detected earlier in pregnancy, especially if the index of suspicion is low.

It also highlights crucial considerations for future pregnancy management as careful planning is required after cornuotomy and myometrial resection because of the high risk of uterine rupture in subsequent pregnancy.

Discussion

There are very few cases of term cornual pregnancy reported in the literature. Rathod et. al described a similar case of a cornual EP diagnosed at the time of elective caesarean section, in a late booker with the delivery of a live baby [3].

Both cases highlight the limitations of second-trimester ultrasound in detecting an ectopic pregnancy when the patient is asymptomatic and has no risk factors for EP.

A systematic review by Richardson, looking at the accuracy of first trimester scanning for diagnosis of EP, found a sensitivity of 81.1% and a specificity of 79.5% in patients with an empty uterus [4]. However in later pregnancy, with the presence of a fetus, lack of awareness of pre-existing Mullerian tract abnormality, no maternal risk factors, the index of suspicion for this rare condition is usually low.

What would be the recommended mode of delivery for our patient, in her subsequent pregnancies?

Currently there are no evidence guidelines, however most obstetricians would probably advise an elective caesarean section because of potential weakened upper uterine wall [5,6].

Conclusion

Cornual pregnancy is a **potentially life-threatening condition** that, once diagnosed, should be actively managed. The main risk is cornual rupture, either spontaneously or during established labour, which can be life-threatening for both mother and child.

This patient was fortunate to remain well until her elective caesarean section at 37 weeks when the diagnosis was made. The case highlights the limitations of second-trimester ultrasound in detecting conditions that are typically identified earlier in pregnancy.

References:

[1] Radwan F, Steel M. Management of cornual (interstitial) pregnancy. *Obstet Gynaecol* 2007;9:249-55.

[2] Youssef, Y. et al. Laparoscopic cornuostomy for interstitial ectopic pregnancy.. *AJOG* 2022;226(3):S1364.

[3] Rathod S, Samal SK. A true cornual pregnancy with placenta percreta.. *Int J Appl Basic Med Res* 2015;5(3):203-5.

[4] Richardson A, et al. Accuracy of first-trimester ultrasound in diagnosis of tubal ectopic pregnancy.. *Ultrasound Obstet Gynecol* 2016;47(1):28-37.

[5] Lee, S.J. et al. A live birth after laparoscopic cornual resection.. *Korean J Obstet Gynecol* 2012;55(8):610.

[6] Su CF, et al. Uterine rupture at scar of prior laparoscopic cornuostomy.. *J Obstet Gynaecol Res* 2008;34(4 Pt 2):688-91.

Case

Initial Clinical Presentation

29-year-old, otherwise healthy, primigravida,
Booked late at 20w
No reported early pregnancy problems
No risk factors for EP

Ultrasound Findings (Anomaly Scan - 20 weeks)

Bicornuate uterus
Structurally normal fetus
Breech presentation, in right horn
Placenta: Anterior, low-lying
Liquor Volume: Normal

Follow-up Scans (28 & 33 weeks)

Fetal Growth: Normal
Fetal Lie: Persistently transverse
Placenta: Remained low-lying

Management Plan (Pre-operative)

Patient listed for elective caesarean section at 37 weeks for transverse lie and low lying placenta

Intraoperative procedure & pathology findings

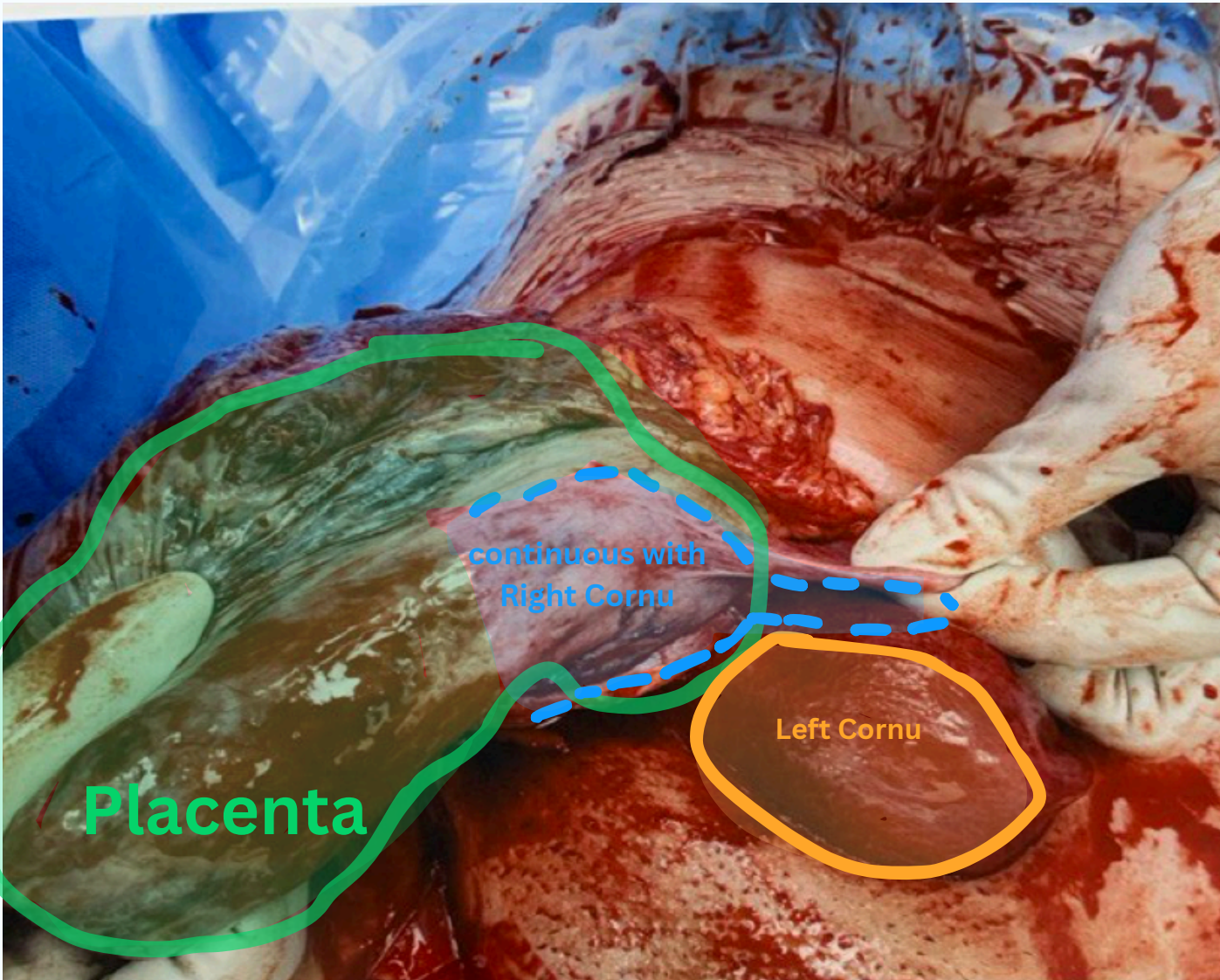


Fig 1. Intra-operative image showcasing the placenta adherent to uterine wall.

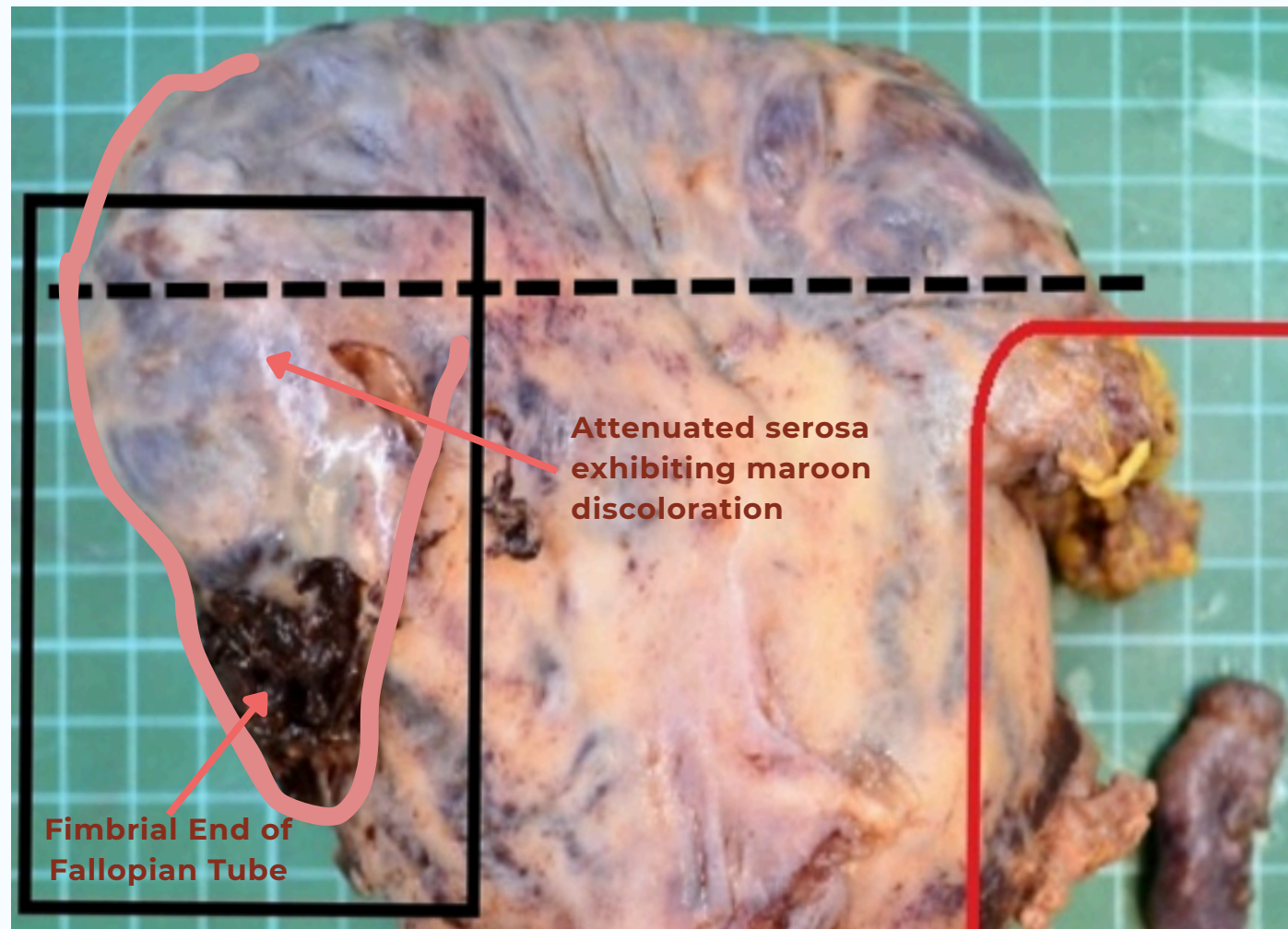


Fig 2. Image of the right cornuotomy with dilated right fallopian tube.

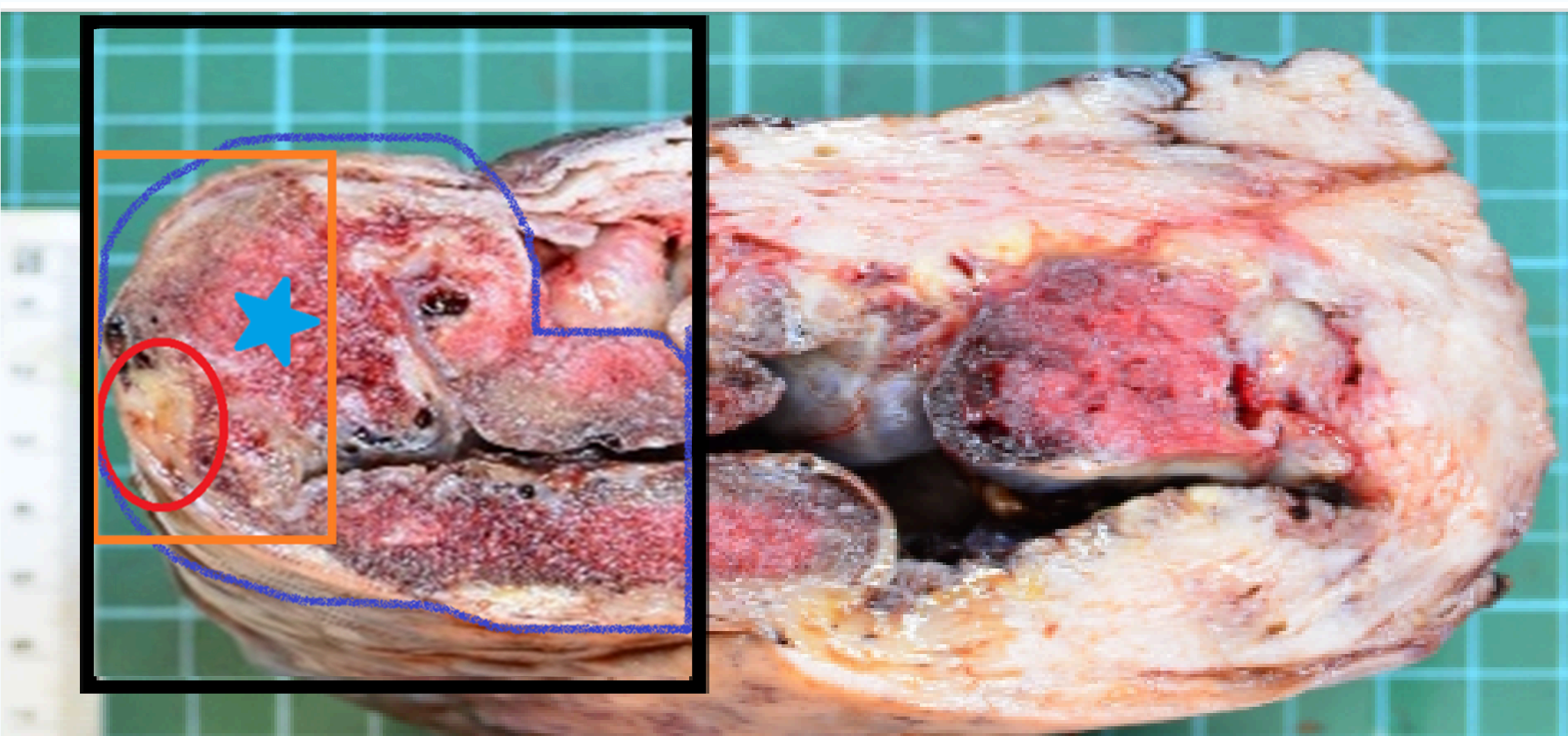


Fig 3. A transverse section of the uterus showcasing the placenta (black box) with implantation attenuating the myometrial wall (orange box) with a cotyledon (blue star). The red circle denotes a chorangioma.

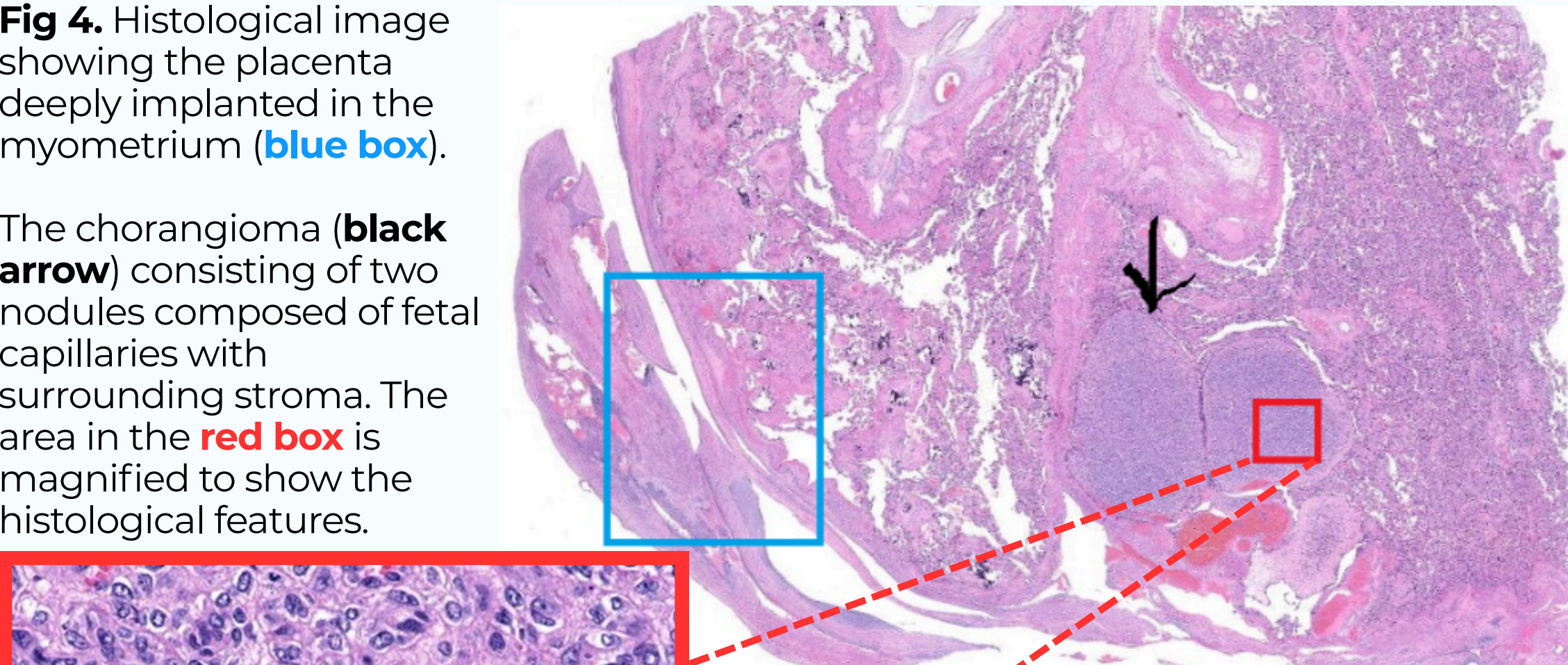


Fig 4. Histological image showing the placenta deeply implanted in the myometrium (blue box). The chorangioma (black arrow) consisting of two nodules composed of fetal capillaries with surrounding stroma. The area in the red box is magnified to show the histological features.

- Pfannenstiel incision
- Bicornuate uterus noted with pregnancy in the right horn
- Left horn retracted
- Transverse incision made on the right horn
- Baby delivered breech
- Placenta delivery attempted but was morbidly adherent to adjacent tissue
- Decision made to resect the right uterine cornu and right salpingectomy to achieve complete and safe removal of the adherent placenta.
- Surgical specimen comprising resected right uterine cornu with placenta and right fallopian tube sent for histopathological analysis
- Histopathology showed a markedly dilated right fallopian tube up to its fimbrial end and, confirmed full-thickness placental implantation directly into the serosa at the uterine cornu
- Findings were compatible with placenta increta at the right cornu