Re-Examination of Term Ovarian Pregnancy

A Case Series

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INTRODUCTION

Ectopic pregnancy accounts for 1% to 2% of all reported pregnancies worldwide, with the most common location in the fallopian tubes (95%). Less commonly, ectopic pregnancies can be abdominal (1%) and in the one of the ovaries accounting to 0.5 to 3%.

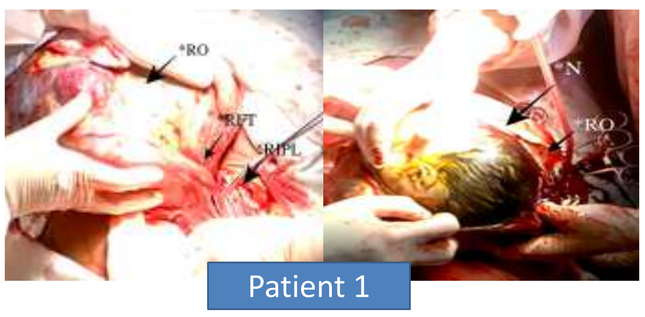
Primary ovarian pregnancy was first reported in 1682 by St. Maurice, with an incidence of 1 in 7,000 to 1 in 60,000 pregnancies. These pregnancies usually terminate during their first trimester due to rupture accounting to 65% in less than 8 weeks' gestation and 91% in less than 13 weeks. The rarest phenomenon is for a primary ovarian pregnancy to reach near term or even post term, with a recorded incidence of less than 3.7%. The last accounted cases were in 1973 by Pratt-Thomas, et. al, they confirmed 10 cases of term ovarian pregnancies, to this date no available accurate data on the incidence of term ovarian pregnancy exist, due to lack of clear diagnostic criteria and the limitations with using the Spiegelberg criteria.

In our center alone, 4 cases of term ovarian pregnancies all undiagnosed preoperatively and with varying clinical presentation were admitted in a span of one year (2017). This case series will provide a picture of the various clinical presentations, management options and possible complications in order to adequately prepare clinicians in managing cases of undiagnosed term ovarian pregnancies that may be encountered in practice.

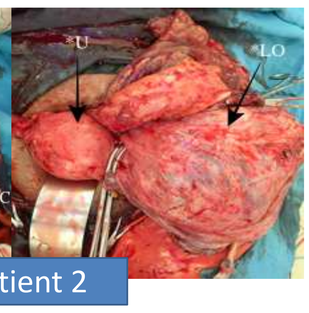
RESULTS

Summary of the clinico-demographic profile, fetal outcome & histologic findings of each case:

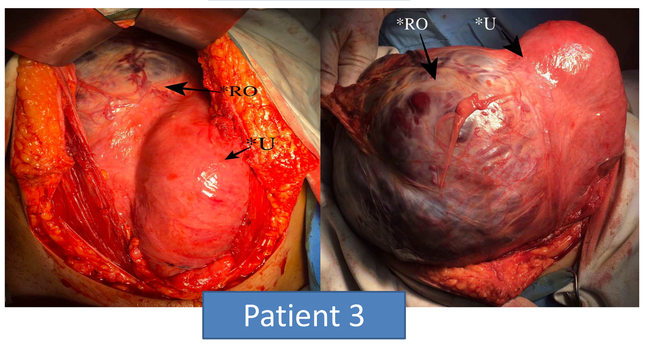
Case/ Age	OB Score	Symptoms	Sonologic Findings	Indication for Cesarean Section	Blood loss & Blood transfused	Adhesions	Fetal Outcome	Histologic Findings
1 29 yo	G1P0 36 weeks	Asymptomatic	Breech presentation, Fetal cardiomegaly and pericardial effusion Low normal AFI	Non-reassuring fetal heart rate pattern and mal-presentation	1L None	None	Live, female neonate, AS 9,10 BW 2,610g Pediatric aging of 42 weeks	Term placenta and no ovarian tissue
2 26 yo	G1P0 37 weeks & 3 days	Asymptomatic	Placenta previa totalis Low normal amniotic fluid	Placenta previa totalis	4.5 L 11 units of packed red blood cells & fresh frozen plasma	(+) portion of the small intestines and right ovary was adherent to the pelvic sidewall and right ureter	Live, male neonate, AS 6,7,7 BW 3,170g Pediatric aging of 37 weeks	Placental tissues bordered by decidual and thin fetal membranes
3 28 yo	G3P2 (1101) 37 weeks & 4 days	Bloody vaginal discharge	Intrauterine fetal demise Placenta posterior, high lying Oligohydramnios (5.7cm)	Failed induction of labor	3.5 L 8 units of packed red blood cells	(+) massive adhesions noted in the ascending colon, pelvic side walls and left ovary	Stillbirth female neonate, AS 9,10 BW 3.050g	Term placenta and no ovarian tissue
4 36 yo	G5P4 (4004) 39 weeks & 4 days	Epigastric pain	None	Placenta previa totalis	4L 4 units of packed red blood cells	(+) adherent bowels and omentum to uterus	Live, male neonate, AS 3.5 BW 3,860g Pediatric aging of 37 weeks	Consistent with ovarian pregnancy



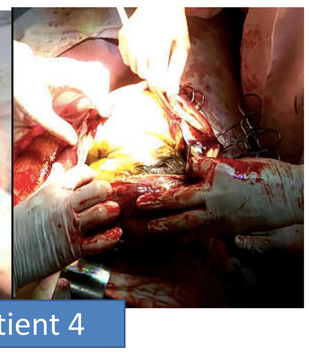
Patient 1



Patient 2



Patient 3



Patient 4

Legend: RO, right ovary; RFT, right fallopian tube; N, neonate; LO, left ovary; P&UC, placenta & umbilical cord; U, uterus.

CONCLUSION

Only 1 out of the 4 cases had a histologic finding consistent with ovarian pregnancy, supposed histologic identification of normal ovarian tissue to meet the Spiegelberg criteria may not be possible, thus we propose a different criteria for the diagnosis of term ovarian pregnancy. There have been debates and controversies on this criteria, leading to an underestimation of diagnosed ovarian pregnancy cases. A new set of diagnostic criteria was formulated by Sergent et al in 2002, to diagnose ovarian pregnancy with the following findings :

1) Serum ß-hCG level of ≥1,000 IU/L & an empty uterus at vaginal ultrasonography
2) Confirmation of ovarian pregnancy on surgical exploration, with bleeding, visualization of chorionic villi, or the presence of an atypical cyst on the ovary
3) Grossly normal appearing fallopian tubes
4) Undetectable serum ß-hCG after treatment of the ovary.

And since pre-operative preparation is usually not possible in these cases due to difficulty of establishing pre-operative diagnosis through physical examination and ultrasound, intraoperative management is crucial. Multiple complications especially massive blood loss, ureteral or bladder injury can be incurred. A multidisciplinary surgical team is warranted in cases of severe adhesions and at times, fertility sparing surgery might not be feasible.

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