ECRONICON OPEN ACCESS

EC GYNAECOLOGY
Case Report

Adnexal Masses in Pregnancy- Diagnostic Dilemma

Nousheen Khan[1]*, Shalini Malhotra[2] and Muna Khlafan[3]

[1]*Specialist Obstetrics and Gynecology Department, Al Qassimi Women and Child Health Hospital, Sharjah, UAE*

[2]*Consultant, Al Qassimi Women and Child Health Hospital, Sharjah, UAE*

[3]*HOD, Al Qassimi Women and Child Health Hospital, Sharjah, UAE*

***Corresponding Author:** Nousheen Khan, Specialist Obstetrics and Gynecology Department, Al Qassimi Women and Child Health Hospital, Sharjah, UAE.

Received: July 27, 2020; **Published:** October 22, 2020

Abstract

Adnexal masses in pregnancy after introduction of a 5 mm scope at palmer's point, a pearly white mass was seen, lobulated, arising from the left side of the fundus with a wide pedicle attaching it to the left end of the fundus of the uterus. The mass was described as irregular, firm, reaching much above the umbilicus, giving the appearance of a large sub serous fibroid.

Keywords: *Fibroid; Pregnancy; Ovarian Cyst*

Introduction

Adnexal masses in pregnancy presents a unique challenge in diagnosis due to the gravid uterus attenuating abdominal spaces and anatomical variances associated with it limiting view of adnexa and posterior aspect of uterus. The management of pregnant patients presenting with abdominal pain and enlarged masses thus, remains a big challenge for the obstetrician, weighing the risks of surgical intervention in a pregnant lady. This case very precisely highlights the limitations of ultrasound, (even when done with experts) and the importance of diagnostic laparoscopy for final diagnosis of adnexal masses in pregnancy when symptoms persist in the patient.

Case Report

Mrs M, a 38 year old primigravida, attended emergency department with acute onset vomiting and associated abdominal pain at 13 weeks gestation with no previous history of hyperemesis earlier. On examination, a mass was palpated up to the level of umbilicus, firm in consistency, with tenderness. Urgent ultrasound was ordered, and it revealed, a huge right ovarian cyst, measuring 9.8 cm x 7.6 cm, with small solid area and septation noted alongside a single live intrauterine pregnancy of 13 weeks. In view of tender abdomen and palpable mass, patient opted for surgical exploration, after appropriate pre op work up. Diagnostic laparoscopy was planned followed by laparoscopic cyst decompression and cystectomy. After introduction of a 5 mm scope at palmer's point, a pearly white mass was seen, lobulated, arising from the left side of the fundus with a wide pedicle attaching it to the left end of the fundus of the uterus. The mass was described as irregular, firm, reaching much above the umbilicus, giving the appearance of a large sub serous fibroid. Left ovary was seen separately. Viewing with a gravid uterus was a challenge considering the large size of this mass. A thorough review of the entire abdominal cavity was done, in an attempt to pick up any mass/cyst (considering ultrasound by two experts which were suggestive of an ovarian cyst). In view of broad pedicle attached to gravid uterus, decision for myomectomy was postponed to post pregnancy Patient recovered well post-operative and was debriefed in detail about her condition, risks and left hospital same day. Follow up with consultant planned regularly in

obstetrics clinics and except for development of gestational diabetes, which was well controlled with diet control, and pregnancy went on well. Currently she is at 36 weeks gestation, planned for induction at 38 weeks in view of gestational diabetes and fibroid.

Discussion

The incidence and detection rates of adnexal masses have increased tremendously with the application of ultrasonography in early pregnancy and at follow-ups [1,2]. According to a recent study, adnexal masses are discovered in 1 per 76-1 per 2328 deliveries [3] decision making in a pregnant female mandates consideration about both her and her unborn fetus, which makes it complex, complicated and varied. The main concerns are risks of no intervention particularly multiple return visits with acute complaints, pregnancy complications like preterm labour, risks to fetus of anesthesia, risk of peritonitis due to rupture of ovarian masses, septic thrombophlebitis due to emboli from torsion of cystic masses.

With advances in the field of imaging technologies, it is very important to understand the choices available to the physician in order to make the most accurate diagnosis of any adnexal mass in pregnancy. This would help guide the treatment, avoiding unintended interventions which could be risky in pregnancy. The most 3 main modalities used in diagnosis are ultrasound MRI, CT scan.

To start with, the most common modality available in the emergency department which receives this spectrum of cases is the ultrasound. Use of this modality is rampant as all emergency physicians and gynecologist are trained to use this mode to assess and give a provisional diagnosis. Both trans abdominal and trans vaginal ultrasound combined improve the diagnostic accuracy. Ovarian enlargement was the most sensitive sonographic finding with a sensitivity of 85% and specificity of 18.8% [4]. This being higher for fibroids (high sensitivity 99% and specificity 91% when compared to the gold standard histological results) [5]. Following ultrasound the next choice modality includes CT scan and MRI, but the choice is driven by following factors-hemodynamic stability of the patient, trimester of pregnancy, associated renal conditions, cost and availability.

For characterization of ovarian masses, ultrasound is often the first-line method of choice, especially for distinguishing cystic from complex cystic-solid and solid lesions. For complex lesions, primary evaluation with ultrasound are often followed by further evaluation with MRI. MRI can be extremely accurate in the diagnosis of benign lesions, such as mature cystic teratomas, endometrioses and degenerative leiomyoma. In fact, many studies have shown MRI to be superior to both US and CT scans in diagnosing malignancy in indeterminate ovarian masses [8].

MRI can assist sonographic assessment of adnexal masses in pregnancy by showing the uterine origin and extent of exophytic leiomyoma; red degeneration of leiomyoma; endometrioma and characteristic findings of dermoid cyst, decidualized endometrium and massive ovarian edema. The distinction and specific characterization of these different neoplastic and non-neoplastic abnormalities require close attention to lesion morphology and signal characteristics and are often aided by review of sonographic findings. Accordingly, MRI should be considered a useful adjunct when sonography is inconclusive or insufficient to guide management of adnexal masses discovered in pregnancy.

The conclusion of a recent large cohort study from Ontario, Canada [9] regarding safety of MRI in pregnancy, it is clear that, "exposure to MRI during the first trimester of pregnancy compared with non-exposure was not associated with increased risk of harm to the fetus or in early childhood. However, gadolinium MRI at any time during pregnancy was associated with an increased risk of a broad set of rheumatologic, inflammatory, or infiltrative skin conditions and for stillbirth or neonatal death. Hence, gadolinium should be avoided during pregnancy.

Conclusion

Adnexal masses in pregnancy are a high risk condition where clear management strategies can only help obstetricians be safe for both the patient and her unborn fetus, balancing risk of surgery with benefits. Although the diagnosis of most adnexal pathologic conditions can be made on the basis of sonographic appearance alone, magnetic resonance imaging may help when the image sonographic appearance is not specific. Clear counseling can only help establish satisfied care plan for each patient as dilemmas and challenges need to be clearly put forward so that patient expectations are addressed and outcome are well accepted.

Source of Support

None.

Conflict of Interest

Nil.

Bibliography

1. Yacobozzi M., *et al.* "Adnexal masses in pregnancy". *Seminars in Ultrasound, CT and MRI* 33 (2012): 55-64.
2. Hoover K and jenkins TR. "Evaluation and management of adnexal mass in pregnancy". *American Journal of Obstetrics and Gynecology* 205 (2011): 97-102.
3. Aggarwal P and kehoe S. "Ovarian tumours in pregnancy: a literature review". *European Journal of Obstetrics and Gynecology and Reproductive Biology* 155 (2011): 119-124.
4. Labib Ghulmiyyah. "Accuracy of pelvic ultrasound in diagnosing adnexal torsion". *Radiology Research and Practice* (2019): 1406291.
5. Sharon L. Myers. "Self-report versus ultrasound measurement of uterine fibroid status". *Journal of Women's Health* 21.3 (2012): 285-293.
6. M Z Hossain., et al. "A comparative study of magnetic resonance imaging and trans abdominal ultrasonography for the diagnosis and evaluation of uterine fibroids". *Mymensingh Medical Journal* 26.4 (2017): 821-827.
7. Ray JG., *et al.* "Association Between MRI Exposure During Pregnancy and Fetal and Childhood Outcomes". *The Journal of the American Medical Association* 316.9 (2016): 952-961.
8. Allyn Jennifer. "Ultrasound vs. MRI for imaging of the female pelvis". RSNA (2017).
9. Nicholas A., *et al*. "MRI of adnexal masses in pregnancy". *American Journal of Roentgenology* 191.2 (2008): 364-370.

Volume 9 Issue 11 November 2020