Management of Ovarian Cyst during Pregnancy

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Objective: To determine the optimum management of ovarian cyst in association with pregnancy. **Setting and duration:** From January 1999 to December 2003 in Gynae Unit I, Jinnah Hospital Lahore and Ghurki Trust Teaching Hospital, Lahore. **Patients & methods:** 21 patients were included in this study. All patients presented in early 2nd trimester of pregnancy (14-26 weeks). Simple ovarian cysts were seen in 20 patients. One patient had a multiseptate cyst and had cystic and solid areas. **Results:** 2 (9.52%) patients had laparotomy for cyst removal in the puerperium; 4 (19.04%) had cystectomy at the time of LSCS while 71.4% (15 patients) had laparotomy for ovarian cystectomy during pregnancy due to torsion. The histopathology report was follicular cysts in 20 patients (95.23%) while 1 (4.76%) had a germ cell tumour. This patient was given PEB (cisplatin, epirubicin and bleomycin) chemotherapy after 20 weeks of gestation. **Conclusion:** Ovarian cyst in combination with pregnancy is seen in 0.01% of pregnancies. Management depends upon the presentation and symptoms. Laparotomy done in the 2nd trimester usually does not cause fetal loss. The cysts are usually benign with malignancy seen very rarely.

Key words: Ovarian cyst, pregnancy

Adnexal masses requiring surgery in pregnancy have been reported to occur in 1 in 81 to 2500 pregnancies.[1] Most adnexal masses during pregnancy are simple cysts, which pose no threat to pregnancy. They usually resolve spontaneously. However, surgical intervention may be required, usually due to torsion. The rate of torsion of adnexal mass is 1% [2] while that of a malignant adnexal mass in pregnancy is also 1%.[3]

During the first trimester, corpus luteum cysts of pregnancy are formed, which usually regress by the beginning of second trimester.[4] The optimum time of surgical intervention is second trimester.[3] There is increased risk of abortion in first trimester and increased risk of pre term labour in third trimester.

Objective:
This study was carried out to determine the optimum management of adnexal masses in association with pregnancy during second trimester.

Duration & setting
This study was carried out from January 1999 to December 2003; in Gynae Unit I Jinnah Hospital Lahore and Ghurki Trust Teaching Hospital, Lahore.

Patients & methods:
A total of 16850 deliveries took place in Gynae Unit I of Jinnah Hospital & Ghurki Trust Teaching Hospital during this period. Patients presenting with ovarian cyst during second trimester (14-26 weeks) of pregnancy were included in the study. Patients presenting with adnexal mass in third trimester were excluded.

No patient presented with a mass during the first trimester. A total of 21 patients presented with adnexal masses with pregnancy during this period. Fetal assessment was carried out, any congenital malformations were specifically looked for gestational age was determined.

USG characteristics of the mass were evaluated and cysts were categorized into benign pattern when they were either simple, uniloculated, showing no or scattered echoes. Cysts were categorized as malignant when solid pattern or multiloculation was seen.

Non symptomatic patients were managed conservatively, while those having pain due to torsion underwent laparotomy, during pregnancy or in the perpeurium.

Procedure:
Informed consent was taken. A pfennenstiel or sub umbilical mid line incision was made depending upon the size of the mass and gestational age. Cystectomy or salpingoopherectomy was carried out. Haemostasis secured and abdomen closed in layers.

Post operative monitoring was carried out. Fetal USG evaluation done at the time of discharge. Mean hospital stay was 4.5 days

Results:
21 patients presented with adnexal mass in second trimester of gestation. Laparotomy was carried out due to torsion in 16 patients and 1 patient was operated for complex multiloculated mass. Fifteen patients underwent laparotomy during pregnancy, while two patients were operated during perperium. Four patients had removal of adnexal masses at the time of lower segment caesarean section.

USG Evaluation

- Simple ovarian cyst (uniloculated) 20 patients
- Multiloculated with solid & cystic areas 1 patient
- Laparotomy 17 (80.9%)
- During puerperium 2 (9.52%)
- During pregnancy (torsion) 15 (71.4%)
- Cyst removal at time of LSCS 4 (19.04%)

Histopathology

- Follicular cysts 20
- Germ cell tumor 1

Patients who had germ cell tumor was given 4 cycles of PEB (cisplatin, etoparide and bleomycin) chemotherapy after 20 weeks of gestation with no adverse affects on the fetus.

Discussion:

In study, 0.12% patients presented with andexal mass during pregnancy. Literature review shows a varied incidence of 1 in 80 to 1 in 2500 pregnancies[1].

The most effective approach in management of adnexal masses during pregnancy remains controversial i.e. laparoscopy versus laparotomy. But, laparoscopic gynaecological surgery can be carried out in 1st trimester and early 2nd trimester; but 1st trimester abortion rate is about 12%[5].

Laparotomy offers a safer option for management of such patients. Intra operative morbidity is lesser and still required to carry out laparoscopic surgery is not a handicap.

If a patient presents with acute pain due to torsion or haemorrhage, laparotomy is the correct course of action to be taken, regardless of the duration of pregnancy[3].

Most of the masses were simple follicular cysts while only 1 was germ cell tumor. The standard chemotherapy for GCT was given. It has been reported that no adverse effects of CT are seen in fetuses after 20 weeks of gestation, with PEB (cisplatin, etopaside & bleomycin)[6, 7].

The previous treatment with VAC (vincristin, dactinomycin and cyclophosphamide)[8] yields equally good results but adverse effects on the fetus have been noted with vinca alkaloids.

Conclusion:

Ovarian cyst in combination with pregnancy is seen in 0.01% of pregnancies. Management depends upon the presentation and symptoms. Laparotomy done in the 2nd trimester usually does not cause fetal loss. The cysts are usually benign with malignancy seen very rarely.

References:

1. Bayer AI, Wiskind. Adnexal torsion: Can the adnexa be saved? Am J. Obst. Gynaecol 1994: 171:1506.
2. Bernhad LM, Klebba PK, Gney DL, et al. Predicators of persistance of adnexal masses in pregnancy. Obst. Gynaecol 1999; 93: 585-589.
3. Joseph S. Sanfilippo, John A Rock, Surgery for benign disease of the ovary; Te Linde's Operative Gynaecology, 9th Edition pg 646. Lippincot; Williams & Wilkans, Philadelphia; 2003.
4. Marjoria Greenfield; Corpus luteal cyst of pregnancy; March 2001: Dr. Spock's Company.
5. Hasson HM. Laparoscopic management for ovarian cysts. J. Reprod Med 1990; 35:863.
6. PEB (Lockrar PJ, Johnson D, Elson P et al. Importance of bleomycin in favorable prognosis disseminated germ cell tumors. Pnoc. Soc Gynaecol Oncol 1999; 114 (abst).
7. William SD, Birch R, Einhorn LH et al. Treatment of disseminated germ cell tumors with cisplatin, bleomycin and either vinblastine or etoposide. N Eng. J Med 1987; 316: 1435-1440.
8. VAC, Caugir A, Smith J, Van Eys J 1978. Improved prognosis in ovarian cancers following modified VAC (vincristin sulfate, dactinomycin and cyclophosphamide) chemotherapy. Cancer 42: 1234-1238.