

Adnexal Mass in Pregnancy: Obstetric Outcome and Management

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ABSTRACT

Background: Adnexal masses are diagnosed in 1 to 4% of all pregnancies. During pregnancy ovarian cysts can undergo resolution of the cyst, change of ultrasound pattern, occurrence of ovarian torsion and intracystic haemorrhage or rupture. The choice of treatment is conservative, provided patient is asymptomatic. Optimal timing for planned surgery is the second trimester as it is shown to have least neonatal outcome. The objective of study was to evaluate management of ovarian cyst in pregnancy and its effect on outcome of pregnancy.

Methods: This study was conducted for 2 years from March 2016 – March 2018 at SKIMS, Srinagar. A total 40 cases were included. The pregnancy outcome and management were studied.

Results: Out of 40 patients, no case of miscarriage was found with most cases delivered vaginally. All the cases were benign, with clear cyst most common among them (12 cases).

Conclusion: Optimal management for the ovarian cyst is

conservative in pregnancy, provided patient remain asymptomatic and characteristic of cyst are consistent with benign pathology. Surgical management is to be reserved for symptomatic patient.

Keywords: Adnexal Mass, Ovarian Cyst, Benign.

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INTRODUCTION

Detection of adnexal masses in pregnancy has become increasingly common. Before the routine use of ultrasound adnexal masses in pregnancy were diagnosed by physical examination either incidentally or because of symptoms such as pain. Currently, the American college of obstetricians and gynecologists, in collaboration with the American institute of ultrasound in medicine and the American college of radiology, requires that an attempt to evaluate the uterus and adnexa may be made during obstetric ultrasound.¹

Adnexal masses are diagnosed in approximately 1 to 4 % of all pregnancies.²⁻⁵ The majority of adnexal masses are incidental findings on ultrasound performed for obstetrical indications. A smaller number of adnexal masses are identified because of symptom such as pain. There is significant variability in the reported incidence of adnexal masses diagnosed in pregnancy that depends on definition of an adnexal mass and whether the diagnosis is made by imaging, surgery. Because a pathologic specimen is necessary for definitive diagnosis, ovarian cysts, that are managed expectantly or resolved, are likely to be underdiagnosed.⁶ Studies that include patient diagnosed in the first trimester, will likely find an increased number of simple ovarian cysts compared with second and third trimester studies

because most simple ovarian cysts resolve after first trimester. Detection of ovarian mass in pregnancy is directly related to the ability to visualize ovaries. Visualisation of both ovaries is highest in first trimester when high frequency transvaginal probes can be used and when there is less interference from the gravid uterus. With transvaginal ultrasound in the first trimester, both ovaries can be adequately visualized 95% of the time. The use of trans-abdominal ultrasound has been shown to detect both ovaries in one third and only one in two thirds of patients. In second and third trimester, transabdominal ultrasound was able to visualize both ovaries in only 16%, and in over half of cases (60%) neither ovary can be identified.⁷ The incidence of adnexal masses detected in first trimester varies from 0.2 to 6%.^{8,9} The incidence of adnexal masses detected in second and third trimester is 4.1%.⁵

METHODS

A retrospective study was conducted in department of obstetrics and gynaecology, SKIMS, Srinagar over a period of 2 years March 2016- March 2018. Data collected from 40 pregnant women during caesarean section and incidentally found adnexal mass and its management.

RESULTS

Out of 40 women, 18 were primigravida and 22 were multigravida. Maximum number of cases was seen in age group of 25-29 years (55%) and least number of cases seen in 30-34 years (17.5%).

At the time of presentation 57.5% were in first trimester, 32.5% were in second trimester and 10% in third trimester. On ultrasound, there was evidence of medium/large well defined septated cyst with multiple solid components and echogenic contents with no significant vascularity and some ovarian cyst were found to be simple cyst with clear contents, but no cysts were diagnosed as malignant ultrasonographically.

The mode of delivery in most cases was vaginal, and no case of miscarriage was seen.

Out of 40 women, presence of clear cyst in 12 women, fimbrial cyst in 9, corpus luteal cyst in 7, haemorrhagic cyst in 1, dermoid cyst in 3, mucinous cyst in 5, serum cystadenoma in 2 and parovarian cyst in 1 case. Conservative approach was followed for 25 patients while cystectomy was performed in 9 cases; fluid aspiration was done in 6 cases.

Table 1: Distribution of study group based on Obstetric index

Gravida	Number of women(40)
Primigravida	18 (45%)
Multigravida	22 (55%)

Table 2: Distribution of study group on the basis of maternal age

Age (in years)	Number of women
20-24	11(27.5%)
25-29	22(55%)
30-34	7(17.5%)

Table 3: Distribution of study group on the basis of gestational age at the time of presentation

Trimester	Number of cases(40)
First (upto 12 weeks)	23(57.5%)
Second (13-28 weeks)	13(32.5%)
Third (29-40 weeks)	4 (10%)

Table 4: Distribution of cases on the basis of ultrasound features

Ultrasound features	Number of cases(40)
Benign	40 (100%)
Malignant	0

Table 5: Complication of ovarian cysts

Complications of ovarian cysts	Number of cases(40)
Torsion	1(2.5%)
Rupture	1(2.5%)
Haemorrhage	0
Abdominal surgery during pregnancy (due to increase in size and pain)	5 (12.5%)
Hospitalization due to pain	5 (12.5%)

Table 6: Pregnancy outcome

Obstetric outcome	Number of cases (40)
Vaginal delivery	21 (52.5%)
Caesarean section	19 (47.5%)
Miscarriage	0

Table 7: Distribution of cases on the basis of type of cyst

Type of cyst	Number of women
Clear cyst	12
Fimbrial cyst	9
Corpus luteal cyst	7
Hemorrhagic cyst	1
Dermoid cyst	3
Mucinous cyst	5
Serum cystadenoma	2
Parovarian cyst	1

Table 8: Management of ovarian cysts

Management of cases	Number of cases (40)
Cystectomy	9
Puncture/Aspiration	6
Conservative	25

DISCUSSION

Adnexal masses can be diagnosed in pregnancy with the help of ultrasound examination. Ultrasound has a great value in the diagnosis and monitoring and monitoring of adnexal masses in the first and beginning of the second trimester of pregnancy, but later on, as the uterus enlarges, the correct diagnosis is hard to establish.¹⁰ Obstetricians can find themselves facing another dilemma during cesarean section when they incidentally discover an adnexal mass regarding the medico-legal issues on informed consenting process. Cystectomy is the recommended procedure, ovariectomy and ovariectomy with salpingectomy being reserved for complex cases. In case of suspicion of malignancy during surgical examination, surgical treatment of the adnexal masses has to be performed with adequate staging and debulking equal to treatment of non- pregnant women. However, whereas during organogenesis abortion has to be considered prior to chemotherapy, later in pregnancy surgical debulking as complete as possible, followed by taxol-platinum chemotherapy is indicated. If the fetus is not viable at the time of primary surgery, neoadjuvant chemotherapy and complementation of surgery after delivery of baby should be performed. Aspiration of cysts should be avoided, as the correlation between histological evaluation of an ovarian malignancy and the cytological evaluation of aspirates is poor. Moreover, spillage of malignant cysts is hazardous for patient.¹¹

Sheela et al., study had 43.5% primigravida and 56.5% multigravida with ovarian cysts with most cases in age group of 20-24 years (52.2%). Sheela SR et al., had maximum number of cases with ovarian cysts diagnosed in first trimester (54.3%). Based on ultrasound features all the cases were benign (100%) in Sheela SR et al., study. The most common complication was abdominal surgery during pregnancy (due to increase in size and pain) in 13% of cases, hospitalization due to pain in 4.3% and torsion in 4.3% cases in Sheela SR et al., study. In the same

study, 60.9% cases had vaginal delivery, 37% cases had LSCS and 2.1% cases of miscarriage.¹² Dede and Hoffman concluded that at time of cesarean section incidental adnexal masses should be surgically removed, avoiding later surgery and establishing malignancy status of the mass.¹³ Leiserowitz adds that ovarian masses should be removed intact when possible especially in suspicious cases.⁶ Sheela SR et al., concluded that optimal management for ovarian cyst is conservative in pregnancy provided patient remain asymptomatic and characteristic of cyst are consistent with benign pathology.¹²

In a study conducted by Savelli et al., 11 out of total 50 patients, 35 patients had simple ovarian cysts, 8 had cystadenofibroma, 5 had cystadenoma and 2 had serous papillary borderline tumors.¹⁴ Another study by Smorgick et al., 12 reported 7 cystadenomas and 8 cystadenomafibroma out of 47 ovarian cysts on histopathology.¹⁵

CONCLUSION

Adnexal masses, which arise during pregnancy, are functional and asymptomatic and resolve spontaneously. Persistent adnexal masses carry a low risk of malignancy and ultrasonography is the preferred method to assess the risk. On the other hand when strong clinical suspicion of malignancy or presence of acute abdomen or severe clinical manifestations occurs, surgical treatment is indicated by laparotomy or laparoscopy.

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