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Case Report

Placenta percreta with omental deciduosis- A rare case report

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ABSTRACT

Introduction: Placenta percreta is the most invasive form of placenta accreta spectrum (PAS) in which there is full thickness invasion of uterine wall by villous tissue through the serosa. Omental deciduosis is a benign transient condition uncommonly encountered during pregnancy. It can mimic granulomatous pathology and various metastatic carcinomas both grossly and microscopically.
Case Report: We report a case of 28 year Rh negative, female, primigravida who presented with amenorrhea since 7.5 months and absent fetal movements since 1 day. Ultrasonography depicted fetus with 33 weeks POG with intrauterine fetal death with breech presentation and severe oligohydramnios. Patient underwent laparotomy and subtotal hysterectomy along with extraction of fetus and omentectomy. Histopathology findings revealed placenta percreta and omental deciduosis.
Conclusion: This case is reported as the concomitant existence of both placenta percreta and omental deciduosis in a single primigravida patient is an extremely rare occurrence.

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1. Introduction

Placenta percreta is the most invasive form of placenta accreta spectrum (PAS) disorders, where the villous tissue is found to invade the full thickness of the uterine wall through the serosa.[1] The incidence of placenta accreta has been reported to have increased by 10 folds in past 50 years in both developed as well as the developing world and is now encountered in 1 in 2500 pregnancies.[2]

Increase in caesarean section delivery, advanced maternal age and delay in child bearing has shown to be associated with an increase in incidence of placenta accreta in developed countries, while in developing countries, the risk factors include high parity and multigravidity.[2] Diagnosis depends on the finding of placental villi directly apposed to myometrium.[3]

Ectopic decidual reaction (deciduosis) is a metaplastic process found on serosa of Mullerian organs and can be seen in the ovary, cervix, appendix, bladder and very rarely on the omentum as an incidental finding during laparotomy for a cesarean section.[4] Peritoneal deciduosis is a benign, transient, self limited condition which is encountered uncommonly during pregnancy and more specifically during the late pregnancy of twin gestation.[4] This is considered to be a metaplastic process of the mesenchymal submesothelial cells related to the hormonal effect of progesterone during pregnancy.[5] Grossly they appear as focal or diffuse tan to yellow nodules within the peritoneal cavity and can be confused with carcinomatosis or tubercular granulomas.[5]

Microscopically, it is important to differentiate ectopic decidua with deciduoid malignant mesothelioma, metastatic malignant melanoma, and various metastatic carcinomas. Immunohistochemistry including PR, Cytokeratin 5/6, vimentin, calretinin, HMB-45 and S-100 protein can be

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helpful to confirm the diagnosis.[4] We report a case of Placenta percreta with omental deciduosis in a 28 year old primigravida female.

2. Case Report

2.1. Clinical presentation

A 28 year old, Rh negative, primigravida presented with amenorrhea since 7.5 months and absent fetal movements since 1 day. The per abdomen and per speculum findings revealed fetus corresponding to 30-32 weeks pregnancy with absent fetal heart sounds. Ultrasonography depicted fetus with 33 weeks POG with intrauterine fetal death with breech presentation and severe oligohydramnios. Patient underwent laparotomy and subtotal hysterectomy along with extraction of fetus and omentectomy. The uterus was ruptured at the fundus and fetus was found lying in the subdiaphragmatic region in the abdominal cavity.

2.2. Gross findings

We received a ruptured uterus with morbidly adherent placenta implanted in the fundus penetrating and perforating the uterine wall. Presence of three intramural fibroids in the lower uterine segment was an additional finding. (Figure 1a) The omentum showed multiple greyish brown plaques and areas of hemorrhage. (Figure 1b)

2.3. Microscopic findings

Sections from ruptured uterine fundus showed chorionic villi invading the serosa along with focal areas of infarction and large areas of hemorrhage. (Figure 2a-b) Sections from omentum showed nests of decidual tissue composed of polygonal cells with abundant eosinophilic to vacuolated cytoplasm interspersed between adipocytes. (Figure 3 a-b).

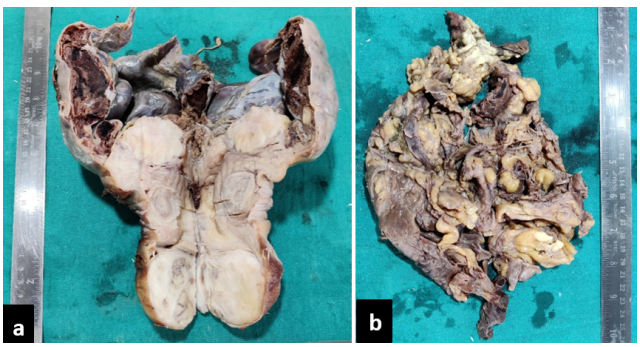

Fig. 1: a: Subtotal hysterectomy specimen with morbidly adherent placenta at ruptured uterine fundus and leiomyomas in lower uterine segment; **b:** Omentum showing greyish brown plaques and areas of hemorrhage.

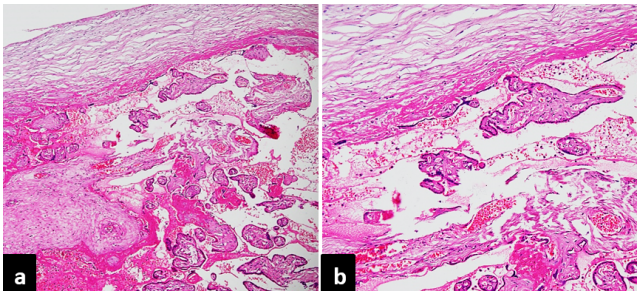

Fig. 2: a & b: Low power (100x) and high power (400x) view of H&E stained sections from uterus showing chorionic villi directly apposed against uterine serosa along with areas of infarction and hemorrhage.

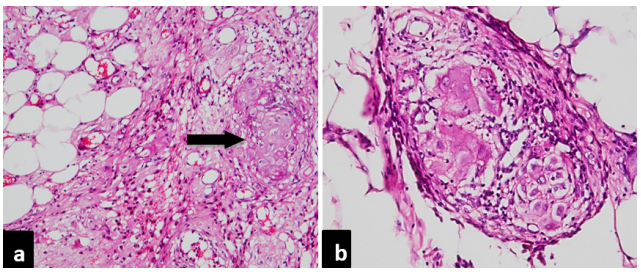

Fig. 3: a & b: Low power (100X) view and high power view (400x) of H&E stained sections from omentum showing nests of decidual cells (arrow) interspersed between adipocytes.

3. Discussion

Placenta accreta is classified into placenta increta and percreta depending on the degree of penetration by placental villi and is a significant cause of maternal morbidity and mortality worldwide.[2] In cases of placenta percreta, a rupture site is usually obvious, as in our case.[2] A localized decidual defect resulting from previous uterine curettage or caesarean section is thought to be the rationale for increased incidence in women.[1]

It has been recently suggested that percreta, is due to scar dehiscence, allowing penetration of chorionic villi and extravillous trophoblast into deeper myometrium and uterine serosa.[1] However, this hypothesis does not explain cases of placenta accreta in primigravida without any prior history of cesarean section, infection or trauma, like the scenario in the present case in which the patient was a primigravida with no history of previous instrumentation or infection.[2] This reiterates the view that placenta accreta may be more than just simply due to a decidual deficiency alone or due to the overinvasiveness of trophoblasts.[2]

Ectopic decidua was first defined in the year 1887 by Walker and ten years later by Schmorl in 1897.[6] It is commonly seen in the uterine serosa, ovaries, cervix and lamina propria of fallopian tubes and rarely in the appendix, diaphragm, liver, spleen, renal pelvis, omentum and paraaortic pelvic lymph nodes and commonly

related to pregnancy.[4] Ectopic deciduosis is considered to be a metaplastic process of the hormone- sensitive mesenchymal submesothelial cells due to the hormonal effect of progesterone during pregnancy and it regresses spontaneously 4-6 weeks after pregnancy.[5] In case of non- pregnant or post- menopausal women, it is usually associated with a progesterone- secreting active corpus luteum or adrenal cortex.[6] Peritoneal ectopic decidua is found incidentally in biopsies obtained during a tubal pregnancy, cesarean section, appendectomy or elective tubal ligation most commonly seen in pregnant women with twin gestation.[7]

The surgeon can mistake the lesions of peritoneal or omental deciduosis for carcinomatosis or granulomas grossly.[5] In Indian literature, a few case reports of gross peritoneal deciduosis have been reported. Shukla et al reported a series of three cases of this condition in young pregnant women with involvement of omentum and suspected the nodules to be tubercular granulomas.[8] Khajuria et al reported a case of diffuse peritoneal ectopic decidual reaction appearing as pale whitish nodules simulating tubercular granulomas discovered during cesarean section in a young female.[5] In the present case the lesions were an incidental finding on laparotomy and were suspected to be exudative lesions following uterine perforation.

We did not find any study or case report in literature in which placenta percreta was associated with omental deciduosis and this finding could be merely coincidental.

4. Conclusion

Decidual reaction in the omentum is a rare incidental finding which usually regresses on its own without any therapeutic intervention. This case is reported as a concomitant existence of both placenta percreta and peritoneal deciduosis in a primigravida patient is an extremely rare occurrence not previously reported in literature.

5. Conflict of Interest

The authors declare that there is no conflict of interest.

6. Source of Funding

None.

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