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Caesarean Scar Ectopic Pregnancy: A Case Series at Tertiary Care Centre Jhalawar

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Abstract

Background and Method: The aim of this study to collect cases of caesarean scar pregnancy and do retrospective case series study to describe the newer entity, clinical condition scar ectopic pregnancy and the evolution of diagnosis, treatment modalities and outcome. The incidence of Caesarean scar ectopic pregnancy has been increasing in recent times. Probably the rising caesarean rate around the world responsible for it. We are reporting five cases of Caesarean scar ectopic pregnancies during the duration of 18 months, out of which 2 cases were confirmed by ultrasonography and rest were suspected during dilatation and evacuation and diagnosed on exploratory laparotomy, were confirmed by histopathological report. All cases were managed surgically. Out of 5 cases uterus were saved in 4 cases.

Conclusion: Scar ectopic pregnancy is a dangerous and life threatening condition with increasing occurrence in recent years because the incidence of caesarean delivery increased. The success of treatment depends on diagnostic accuracy. Accurate and early diagnosis would reduce the chances of hysterectomy, multiple blood transfusion, maternal morbidity, maternal mortality and preserve fertility.

Keywords: Caesarean scar, ectopic pregnancy, laparotomy

Study Designed: observational retrospective case series

Introduction

A caesarean scar pregnancy is a very rare form of pregnancy that occurs when the developing blastocystimplants on a previous caesarean scar like all ectopic pregnancies, it can be pregnancy after uterine curettage due to a suspicion of inevitable abortion with persisting potentially life threatening given the risk of heavy haemorrhage and uterine rupture1.

Its incidence is rising in parallel with the increase in primary and repeat cesarean sections. Globally, the incidence of primary cesarean section averages 18.6% of all births2.The frequency of cesareanscar pregnancy is reported to be 1:1,800 to 1:2,226 (0.05–0.04%) of all pregnancies. In womenafter a cesarean section, the frequency of

cesarean scar pregnancy is approximately 0.15%, which constitutes 6.1% of all ectopic pregnancies in patients after at least one cesarean operation3. The first case of cesarean scar pregnancy was reported in 1978 by Larsen and Solomon.It was a 6-week heavy bleeding and intense abdominal pain. Laparotomy revealed the presence of gestational tissues in the recess of a caesarean section scar3.

The scar ectopic is more common following caesarean section, hysterotomy, dilatation and curettage (D&C), and uterine surgeries like myomectomy, metroplasty, hysteroscopy and manual removal of placenta4. Different types scar ectopic pregnancies are identified. Type I is caused by implantation in the prior scar with progression towards the cervico-isthmic (in prior cesarean delivery) space or uterine cavity. Type II is caused by deep implantation into scar defect with infiltrating growth into the uterine myometrium and to uterine serosal surfacewhich may result into uterine rupture and massive hemorrhage in the first trimester of pregnancy which is most dangerous4. Symptoms include pelvic pain and vaginal bleeding in the first trimester. Many women are asymptomatic at diagnosis. The investigation of choice is transvaginal ultrasound (TVUS), which may be combined with a transabdominal scan for a panoramic view. In equivocal cases, magnetic resonance imaging (MRI) will confirm or refute the diagnosis2. The Ultrasound is useful in diagnosis and certain criteria are.

1. An empty uterine cavity and cervical canal,

2. an gestational sac located at the anterior wall of the isthmic portion, separated from endometrial cavity or fallopian tube in previous caesarean scar,

3. An gestational sac embedded within the myometrium and the fibrous tissue of caesarean section scar at the lower uterine segment with an absence of defect in the myometrium between the bladder and the sac and high-velocity low-impedance vascular flow surrounds the gestational sac However, it is difficult to differentiate scar ectopic pregnancy from anterior cervical ectopic pregnancy, inevitable abortion or a cervico-isthmic pregnancy Hence, high resolution and colour ultrasound scanning is essential for differential diagnosis4.

Treatment modalities are dependent on the case presentation. Women have been managed expectantly, medically with methotrexate, or surgically2. Caesarean scar ectopic pregnancies can have very fatal and poor outcomes, including uterine rupture, massive haemorrhage and maternal death. Thus, it is important that early and accurate diagnosis of Caesarean scar pregnancy is obtained in order to avoid complications and preserve fertility5.

Case Reports

Case 1:

A 24 year old female, gravida 2, para 1, living 1, with 8.1weeks of gestation with history of previous one full term Caesarean section presented with spotting per vagina for 1 day. She had positive urine pregnancy test. On examination patient was conscious, oriented and vital stable. Transabdominal ultrasound revealed an enlarged irregular gestational sac seen in lower uterine cavity with CRL of 38mm, embryonic pole not identified. Diagnosis was incomplete abortion. For management of this patient decision taken for dilatation and evacuation, patient underwent dilatation and evacuation during procedure, patient started profusely bleeding then decision take for exploratory laparotomy. Patient underwent exploratory laparotomy. Hemoperitoneum present around 100cc.Grossly uterus was about 6-8 weeks size with no abnormalities in adnexa. Urinary bladder was identified, mobilizedand pushed down with great difficulty due to adhesion. A large he-matoma of 5-6cm found atprevious scar which was progressively increased in size and bleeding was profuse and uncontrollable, so decision taken for hysterectomy. Patient underwent subtotal hysterectomy and sample send for

histopathological examination. Peroperative 3 unit packed cell volume and 4 unit fresh frozen plasma transfused. Histopathology confirmed that in scared area trophoblastic cell infiltration (syncytotrophoblast etc.) along with haemorrhage and fibrin deposit. The patient postoperative period was uneventfull and discharged from hospital after 9 days of surgery.

Case 2

A 31 year old female, gravida 2 ,para 1,living 1,with 2 months of amenorrhea with history of previous one full term Caesarean section presented with complain of bleeding per vagina for 9 days ,mild lower abdominal pain with severe anemia .She had positive urine pregnancy. She had history of MTP kit taken 11 days back underwent dilatation and evacuation 14-16 hours before she reached our centre. As after D&E patient continued to bleed ,so reported to our casualty department .On examination patient was conscious and oriented clinical Pallor present, PR-99per minute, BP-110/80 mm of hg. On per abdomen examination abdomen soft, tenderness present without guarding and rigidity. On bimanual examination cervix downward uterus was anteverted, 6-8 weeks size, bilateral fornices were free with no tenderness. On investigation, routine blood and urine investigations were normal only haemoglobin was 6.6 gm/do. trans abdominal ultrasound revealed an embryo of 15.7mmcor responding to 7 weeks 6 days, with no cardiac activity seen in lower uterine segment as patient have history of previous c-section, finding are in favour of scar ectopic pregnancy. patient was planned for laparotomy. Hemoperitoneum present around 100-200cc. Intraoprative findings: uterus was ruptured at previous scare site and products of conception present at scare, which was removed, freshening of margins done and uterus was closed in 2 layers, complete haemostasis achieved and sample send for histopathological examination. Total 3units packed cell volume transfused. Sample was sent for histopathological. Histopathological report confirmed that product of conception present at scar site. The patientpostoperative period was uneventfull and discharged from hospital after 8 days of surgery.

Case 3

A 23 year old female, gravida 2, para 1, living 1, with one and half months of amenorrhea with history of previous one full term Caesarean section presented with bleeding per vagina for 4 days with severe anemia.she had positive urine pregnancy test. On examination patient was conscious and oriented clinical Pallor present, PR-98 per minute,BP-130/80 mm of hg. On per abdomen examination abdomen soft with transverse scar. On bimanual examination cervix downward uterus was anteverted, 6-8 weeks size, bilateral fornices were free with no tenderness. On investigation, routine blood and urine investigations were normal only haemoglobin was 6 gm/dl. Transabdominal ultrasound revealed the size of uterus was 110mm × 36 mm, endometrium thickness 6.8 mm. An irregular shaped gestational sac like structure seen in lower uterine and cervical cavity. So diagnosis was RPOC. So the patientplaned for dilatation and evacuation. During dilatation and evacuation, patient started profusely bleeding then decision take for exploratory laparotomy, patient underwent exploratory laparotomy Peroprative uterus was about 6-8 weeks size with no abnormalities in adnexa. Urinary bladder was identified, mobilized and pushed down. Gestational sac seen as a vascular mass of 1cm - 2cm protruding through previous caesarean scar. The margin of previous scar was opened, then the product of conception present at previous scar, which was removed, freshning of margins done. Uterus was stitch in 2 layers, hemostasis achieved. sample send for histopathlogical examination . Total 4 unit packed cell volume transfused. The histopathological report confirmed that product of conception present at scar site. The patient postoperative period was uneventfull and discharged from hospital after 8 days of surgery.

Case 4

A 28 year old female, gravida 2, para 1,living 1, with 2½ months of amenorrhea with history of previous one full term Caesarean section presented with bleeding per vagina for 4 days , mild abdominal with severe anemia. She had positive urine pregnancy test. On examination patient was conscious and oriented clinical Pallor present,PR-102 per minute, BP-110/80 mm of hg. On per abdomen examination abdomen soft with transverse scar. On bimanual examination cervix downward uterus was anteverted, 8-10 weeks size, bilateral fornices were free with no tenderness and excessive bleeding. On investigation, routine blood and urine investigations were normal only haemoglobin was 6 gm/dl. Transabdominal ultrasound revealed missed abortion / ? Ruptured scar ectopic of 8 weeks with CRL1.68 cm. for this patient first of all we planned dilatation and evacuation .During D&E, patient started bleeding profusely then decision take for exploratory laparotomy. Patient underwent exploratory laparotomy. Around 50-100cc hemoperitoneum present. Peroprative uterus was about 6-weeks size with no abnormalities in adnexa. Urinary bladder was identified,mobilized and pushed down with great difficulty due to adhesion. Gestational sac as hematoma of 1cm -2 cm seen on the previous caesarean scar .The margin of previous scar were opened, then the product of conception present at previous scar, which was removed, freshning of margins done. Uterus was stitch in 2 layers, haemostasis achieved. sample send for histopathlogical examination. Total 3units packed cell volume and 4 unit fresh frozen plasma transfused. HPE report show product of conception .The patient postoperative period was uneventfull and discharged from hospital after 9 days of surgery.

Figure: 1

Case 5

A 25 year old female, gravida 3, para 2, living 2, with 2 months of amenorrhea with history of previous two full term Caesarean section presented with spotting per vagina for 20 days. She had positive urine pregnancy test. On examination patient was conscious and oriented clinical Pallar absent PR-86 per minute,BP-110/80 mm of hg. On per abdomen examination abdomen soft with transverse scar. On bimanual examination cervix downward uterus was anteverted, 8- 10 weeks size, bilateral fornices were free with no tenderness and excessive bleeding. On investigation, routine blood and urine investigations were normal. Transabdominal ultrasound revealed an irregular shaped empty gestational sac of 20.4 mm size

seen in lower uterine cavity. Diagnosis was early pregnancy failure of 6 weeks6 days. This patient planned for dilatation and evacuation. During dilatation and evacuation. Patient started bleeding profusely, then decisions taken for exploratory laparotomy. Patient underwent exploratory laparotomy. Around 50-60 cc hemoperitoneum present. Peroprative uterus was about 6-8 weeks size with no abnormalities in adnexa. Urinary bladder was identified, mobilized and pushed down. Gestational sac as haematoma of 2cm -2 cm seen on the previous caesarean scar .The margin of previous scar were opened, then the product of conception present at previous scar, which was removed, freshning of margins done. Uterus was stitch in 2 layers, haemostasis achieved. Sample send for histopathological examination. Peroprative one unit packed cell volume transfused. The patient postoperative period was uneventfull and discharged from hospital after 9 days of surgery.

Discussion:

In our retrospective case series study there were total 5 cases occurs during the duration of 18 months. Out of 5 cases, 2 cases were confirmed by ultrasound and 3 cases were misdiagnosed as RPOC/Incomplete /Missed abortion. Both the cases which were confirmed Case of Caesarean scar pregnancy, planned for exploratory laparotomy. During procedure old scar with product of conception removed, uterus was stitched in layers and preserved. The remained 3 cases were misdiagnosed planned for dilatation and evacuation. During procedure all of 3 cases were started bleeding profusely, because in scar ectopic pregnancy implantation villi find their way into the myometrium through a microtubular tract between the Caesarean section scar and the endometrial canal6. The placenta and the conceptus were totally expulsed from the uterine opening with leaving an opened scar on uterus at previous caesarean scar site. This lead to patients has profuse vaginal bleeding then decision taken for laparotomy, so all 3 cases planned for exploratory laparotomy. During laparotomy in 2 cases bleeding controlled, uterus was preserved. One case in which during laparotomy bleeding not controlled, subtotal hysterectomy was done. In our study, we found that the symptoms of cesarean scar ectopic pregnancy are like that of abortion. Most of patients present with complain of bleeding per vagina. This frequently leads to misdiagnosing these patients as RPOC/missed /Incomplete abortions and ultimately undergo blind procedures like dilatation and evacuation. As the results of misdiagnosis and blind procedure patients start profuse bleeding or uterine ruptureat scar site this lead to patient underwent laparotomy and at the end hysterectomy. Out of 5, one patient underwent subtotal hysterectomy and in 4 patients uterus were preserved. There were no maternal mortality. So early accurate diagnosis and proper management of scar ectopic pregnancy may prevents patients fertility and maternal mortality.

Conclusion:

Scar ectopic pregnancy is a dangerous and lifethreatening condition with increasing occurrence in recent years because the incidence of caesarean delivery increased. The successof treatment depends on diagnostic accuracy. Accurate and early diagnosis would reduce thechances of hysterectomy, multiple blood transfusion, maternal morbidity, maternal mortalityand preserve fertility.

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