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5 years scar dehiscence; case report and theory of occurrence

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Abstract: **-** Scar dehiscence is defined as incomplete disruption of the uterine wall that does not lead to any serious maternal or neonatal consequences. The cause for a uterine scar dehiscence is based on the etiology behind the uterine scar defect or any event that would predispose the cesarean scar to dehisce.We report here on a patient had cesarean section 5 years ago and came now as 36 weeks with scar dehiscence. But the most remarkable is that, the lower edge of the lower segment of the anterior wall of the uterus was completely retracted under the pubic symphysis with intact both corners and no bleeding from the edges. Uterus was repaired. Here we report of the possible scenario to what happen in this patient.

Keywords: *Dehiscence, rupture uterus, obstetric emergency, silk stitches, lower uterine segment*

I. INTRODUCTION

Cesarean section is by far the most common major surgical procedure in obstetrics (1). Currently, its rates are above the levels of reference stated by the World Health Organization (WHO), in both developed and developing countries, with a tendency to increase (1, 2). Delivery by cesarean section is associated with increased risk of maternal and perinatal morbidities in the current pregnancy (3). Additionally, it has been reported an increased risk of adverse obstetric outcomes in the following pregnancy regardless of the delivery mode (1, 3). These outcomes include high risk of uterine rupture, which is raising according to the number of previous cesarean section, and of developing placental abruption (4, 5). Also, some studies have showed an enormous possibility of developing placenta previa (2, 6). Worldwide, every year, between 340,000 and half a million women die due to complications of pregnancy and child birth, the majority of these occurring in low income countries (3, 5). Sub- Sahara Africa bears over 90 percent of the burden [9]. Obstetric haemorrhage remains one of the major causes of maternal deaths (4-6). Uterine rupture is a potentially catastrophic event during childbirth by which the integrity of the myometrial wall is breached (3). In an incomplete rupture the peritoneum is still intact. With a complete rupture the contents of the uterus may spill into the peritoneal cavity or the broad ligament (1, 2, 4). A uterine rupture is a life-threatening event for mother and baby (1). A uterine rupture typically occurs during active labor, but may already develop during late pregnancy (3, 5). Uterine dehiscence is a similar condition, but involves fewer layers, less bleeding, and less risk (2, 6).

The risk of uterine rupture in laboring women with a previous CS varies between 0.2 and 1.5% after induction of labor, compared to 0.5% in women with spontaneous labor after a previous CS (1-3).

Symptoms of a rupture may be initially quite. An old cesarean scar may undergo dehiscence; but with further labor the woman may experience abdominal pain and vaginal bleeding, though, these signs are difficult to distinguish from normal labor (1, 2). Often a deterioration of the fetal heart rate is a leading sign, but the cardinal sign of uterine rupture is loss of fetal station on manual vaginal exam (3).By comparison, a uterine scar dehiscence (CSD) has been loosely defined as a clinically occult and incomplete disruption that does not lead to any serious maternal orneonatal consequences(1, 2). It is often incidentally discovered at the time of cesarean delivery. The incidence of cesarean section scar defect reportedly ranges between 6.6 % to 69 % withvariations mainly due to absence of criteria for the CSD(3, 6). Compared to complete uterine rupture, uterine dehiscence has much lower maternal and neonatal morbidity(5).The cause for a uterine scar dehiscence is based on the etiology behind the uterine scar defect or any event that would predispose the cesarean scar to dehisce(4, 5). Underlying anatomical defects in the uterus which would have been corrected prior to pregnancy like uterine septum or fibroid uterus may weaken the uterus and the resultant scar of the cesarean section(4).In this paper, we report on patient with 5years old uterine scar dehiscence.

II. CASE REPORT

29 years old Saudi woman G2P1+0 36 weeks pregnant came to emergency room in Baljurashi Hospital complaining of severe abdominal pain in lower abdomen. Pain started since she was 4 months pregnant and increased every month but since one day it is unbearable. Patient generally healthy but she cannot stand up straight. She gave history of delivering first baby by cesarean section 5 years ago because of failure to progress at 8 cm cervical dilatation. Followed by postpartum haemorrhage for 3 days treated by intravenous medication. Then she had irregular menstruation for one year and infertility since last delivery 5 years ago. She did not seek

medical advice for the infertility because her husband had another wife who delivered during this period two times.

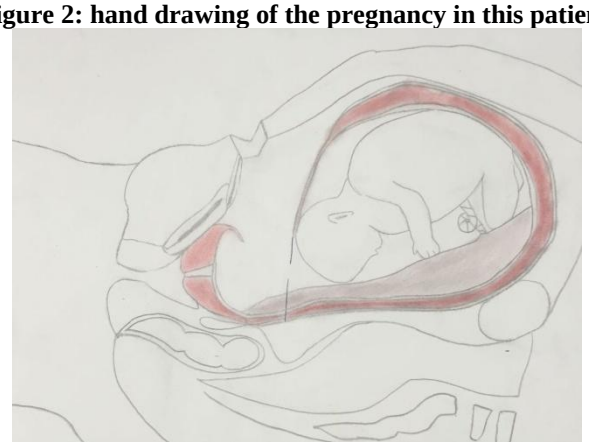
Patient was unbooked and seen in primary health care centre once in early pregnancy just to confirm pregnancy. She was sure of her date and she feels fetal movement normal but painful. Vitally patient was stable, abdomen term, fetal movement felt, extremely tender lower abdomen especially on the cesarean scar (patient jumped), but head of the baby was felt beneath the lower abdomen. Ultrasound was impossible to be done.

The deferential diagnosis was rupture uterus and scar dehiscence. Patient taken for urgent lower segment cesarean section. After opening the skin head of the baby seen under parietal peritoneum outside of the uterus (Figure 1).

Figure1: Head of the baby under peritoneum

Baby was delivered with the whole head outside the uterus. Placenta was adherent in the lower part and removed as piecemeal while the upper two thirds removed easily. Remnants of the silk stitches of previous operation removed where it was piercing the lower third of the placental bed and noticeably extend between lower third of the posterior wall of the uterus and the upper edge of the lower segment of the anterior wall of the uterus. The lower edge of the lower segment of the anterior wall of the uterus was completely retracted under the pubic symphysis with intact both corners and no bleeding from the edges. This part was prepared by shaving 5 mlm of the edge until there is acceptable bleeding from the edge then was sutured in two layers with the upper edge as usual (Figure 2).Patient kept in hospital for 2 days then discharged with her baby in good condition. She was seen after two weeks in good condition, and she was advised not to get pregnant for the next 2-3 years.

Figure 2: hand drawing of the pregnancy in this patient



III. DISCUSSION

Uterine scar dehiscence (CSD) is a rare complication of LSCS(1, 2). The risk of scar dehiscence in the presence of a defective scar is related to the degree of thinning of the lower uterine segment(1, 2, 4). Theincidence of CSD reportedly ranges between 6.6 % to 69 %. Meta-analysis reports have shown the incidence of cesarean scar dehiscence to be around 1.9 %(6). The cause for a CSD is based on the etiology behind the uterine scar defect or any event that would predispose the scar to dehisce(5). Underlying anatomical defects in

the uterus which would have been corrected prior to pregnancy like uterine septum or fibroid uterus may weaken the uterus and the resultant scar of the cesarean section(2). In cesarean sections, risk of rupture in classical (vertical) incision in subsequent pregnancies is greater with the vertical incision as compared to the transverse incision(1, 4). I our patient the most plausible scenario will be; this patient has previous LSCS when she was 8 cm almost fully dilated and the section of the uterus done extremely down. Lower segment was retracted immediately under the symphysis pupis. The doctor sutured the posterior wall of the uterus into the upper edge of the lower segment using silk stitches. Patient mentioned that she had postpartum bleeding for three days on and off, and this seems more logical with having the lower edge of the lower segment open and bleeding and finally clotting and scar formed there.The fact that she was infertile for five years explained by this scenario since sperms would go stray in the abdomen. But the real miracle lies in the fact that this patient had pregnancy after such an event.With the growth of the uterus in size and growth of the fetus silk stitches peered pressure on the back and lower segment of the uterus manifested as pain on the scar site. This pain increased with the growth of the uterus to reach its maximum when the head of the baby cut in to the stitches to pass under the peritoneum. Added to that the stitches in the lower one third of the posterior wall of the uterus explains the difficulty in removing the lower part of the placenta which was posteriorly located.Among the methods for detecting CSD, transvaginal ultrasonography (TVUS) and saline infusionhysterography (SIS) are the simplest and most useful(1, 2). In theTVUS, the CSD can be detected as a defect appearing as atriangular or dome-shaped echo-free space. Performing SIS allows the TVUS results to be clearer and facilitates an accurate diagnosis(2, 3). MRI has been shown to be the most definitive modality to evaluate uterine incision healing after cesarean deliveries. It has the advantage of superior contrast resolution, enabling detailed visualization of tissue planes(1, 2).Exploratory laparotomy should be considered as the most important tool for diagnosis and treatment for uterine scar dehiscence and repair(4).

IV. CONCLUSIONS

Carful operating LSCS is mandatory and in future decreases rate of complications and consequences to that operation. Added to that, the use of absorbable suture material (for example Vicryl) will help fast healing of the wound and decrease complications in the future.Training for new doctors in the field should include such critical cases.

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