

Multifactorial Intraoperative Uterine Scar Dehiscence: A Case Report

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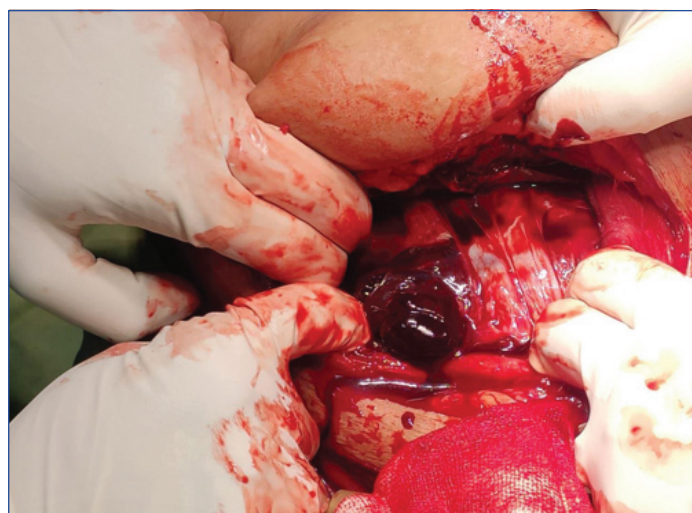
ABSTRACT

Now-a-days, the number of Caesarean section (c-section) has increased, also the complications of c-section has increased. Obstetricians often encounter uterine scar dehiscence during delivery by c-section. However, it is rare to find a uterine scar dehiscence which is extending over one-third of the anterior uterine wall and it is yet to build the best surgical approach for repairing this rare complication of c-section or a torn anterior wall during delivery. Herein, a 23-year-old female who is Rhesus factor (Rh) negative G2P1L1 with seven months of amenorrhea came with chief complaints of pain in the abdomen since morning. On ultrasonography, severe oligohydramnios was diagnosed as Amniotic Fluid Index (AFI) was >5 cm. Hence, the patient was taken for emergency Lower Segment Caesarean Section (LSCS), Lower Uterine Section (LUS) was papery thin, uterovaginal fold of peritoneum was opened and the bladder was pushed down. One-third of the anterior uterine wall was involved. LUS was sutured using vicryl No. 1 and complete haemostasis was achieved. As uterine scar dehiscence is not preventable, efforts should be made to manage it efficiently and repair the myometrium safely.

Keywords: Anterior uterine wall, Lower segment caesarean section, Oligohydramnios

CASE REPORT

A 23-year-old Rh negative female G2P1L1 with seven months of amenorrhea came with chief complaints of pain in the abdomen since morning and giddiness since one hour; she had a history of previous LSCS at term one year back due to severe oligohydramnios and abdominal pain. On per abdominal examination, uterine height was 32-34 weeks with a longitudinal lie and cephalic presentation, foetal movements were present, and foetal heart rate was 136-140 beats per minute. On ultrasonography, severe oligohydramnios was diagnosed as an AFI was >5 cm. Hence, the patient was taken for emergency LSCS due to severe oligohydramnios and pain in the abdomen, risking the lives of both mother and foetus. The patient was given anaesthesia in a supine position with all aseptic precautions. The abdomen was opened by Pfannenstiel incision in layers [Table/Fig-1].



[Table/Fig-1]: Previous scar seen ruptured and bag of membrane seen herniating with placenta.

The LUS was papery thin, uterovaginal fold of peritoneum was opened and the bladder was pushed down. One-third of the

anterior uterine wall was involved. LUS was opened transversely in a curvilinear fashion by fingers. Liquor was absent. A premature baby boy of 2.48 gm was delivered by vertex; the baby cried immediately after birth with Apgar scores of 4 and 9 at 1 and 5 minutes after birth, respectively. The baby was healthy and was shifted to the mother. Inj. Oxytocin 20 units were started and inj. Methergine 1 mL was given to the mother. The uterus was flabby for 30 minutes. The uterine massage was also given. No postpartum haemorrhage was seen. LUS was sutured using vicryl No. 1 and complete haemostasis was achieved. The peritoneum was closed using catgut no. 1 and continuous sutures were taken. Rectus sheath and muscle were sutured using vicryl no. 1 and continuous interlocking sutures were taken. Skin was closed using vicryl no. 1 and mattress sutures were taken. Sterile dressing was done. Vaginal swabbing was done which came out to be dry. The mother withstood the procedure well. Anti-D was given. Intraoperative blood loss was 350 mL. Urine output was 500 mL after the procedure. Tab. Misoprostol 800 mcg suppository was inserted rectally in view to rule out atonic postpartum haemorrhage. The prognosis was good. Both mother and foetus were vitally stable without undue complications.

DISCUSSION

There is the development of a weakened uterus from a scar dehiscence usually from a previous c-section, which grows during pregnancy [1]. With the progression of gestation, the uterus expands, and the scar loses its integrity, which leads to the separation of uterine layers, starting with the inner layers of the uterus and working outward. The defect is considered a dehiscence as long as the serosa layer of the uterus stays intact [1]. It has incidence of 0.2-1.5% following a transverse incision and 4.9% following a classical incision [2]. It is not something very uncommon worldwide and in India too. There are many complications that have been associated with c-sections, out of which early complications are haematoma, infection, wound dehiscence, and thrombus formation, and long-term complications are placenta accreta, peritoneal adhesions, infertility, and myometrial thinning with uterine rupture [3,4].

Encountering unexpected and extensive myometrial thinning are risks of c-section and the repair of this condition can be extremely difficult. Although the fetus can be delivered carefully, wounds to the LUS can extend downward or transversely. Also, it increases the risk of damage to the bladder and other surrounding structures [5].

Tyagi N et al., stated some predictive factors for uterine scar dehiscence with a scoring scheme. Taking that scoring scheme into consideration, the higher the score higher the chances of uterine scar dehiscence [6], but surprisingly when applying the same scoring system in the present case, the score was 2 which meant less chances. The score 2 was of interpregnancy interval less than 18 months (2) while other factors like Period Of Gestation (POG) between 37-40 weeks (2), scar thickness ≤ 2.5 mm (2), 3 gravida and above (2), scar tenderness (4) and birth weight >3 kg (2) turned out to be 0 in this case. In our case with less score, there was a good outcome with uterine scar dehiscence.

Anterior one-third of uterine wall involvement is seen rarely and especially when it comes to the second gravida as it was in this case. Also, there was no secondary postpartum haemorrhage reported in our case which is seen in uterine scar dehiscence which came out to be a positive outcome without endangering the life of the mother [7]. Also in many previous studies, it has been found that chances of uterine scar dehiscence and rupture increase between 37-40 weeks of POG [8,9], but in this case, the POG was between 32-34 weeks.

Hence, there are multiple factors seen in the present case mother being Rh negative, Anterior one-third of uterine wall involvement was seen, POG between 32-34 weeks, but a good maternofetal outcome was observed. But a study suggests LSCS in advanced labour is associated with increased risk of incomplete healing of the uterine incision which further requires proper study and research [10]. More research should be done in the field of ultrasound and MRI evaluation for diagnosing the scar so that impending dehiscence can be picked up early [6]. Also, as stated by Edwards D et al., an ultrasound-guided laparoscopic repair, during early pregnancy can be done efficiently to repair this condition [11]. Furthermore, research is required in the field of radio diagnostics for this condition.

CONCLUSION(S)

Clinical judgment and examination and early decision of such patients will help in the better maternofetal outcome. An adequately equipped clinical team is necessary in every hospital to diagnose and handle such cases. As uterine scar dehiscence is not preventable, efforts should be made to manage it efficiently and repair the myometrium safely.

REFERENCES

- [1] Marshall NE, Fu R, Guise JM. Impact of multiple cesarean deliveries on maternal morbidity: A systematic review. *Am J Obstet Gynecol.* 2011;205(3):262.e1-8. Doi: 10.1016/j.ajog.2011.06.035.
- [2] urol-Urganci I, Bou-Antoun S, Lim CP, Cromwell DA, Mahmood TA, Templeton A, et al. Impact of Caesarean section on subsequent fertility: a systematic review and meta-analysis. *Hum Reprod.* 2013;28(7):1943-52. Doi: 10.1093/humrep/det130. Epub 2013 May 3. PMID: 23644593.
- [3] Silver RM. Abnormal placentation: placenta previa, vasa previa, and placenta accreta. *Obstet Gynecol.* 2015;126(3):654-68. Doi: 10.1097/AOG.0000000000001005.
- [4] Abdelazim IA, Shikanova S, Kanshaiym S, Karimova B, Sarsembayev M, Starchenko T. Cesarean section scar dehiscence during pregnancy: Case reports. *J Family Med Prim Care.* 2018;7(6):1561-65. Doi: 10.4103/jfmpc.jfmpc_361_18. PMID: 30613559; PMCID: PMC6293899.
- [5] Zhu Z, Li H, Zhang J. Uterine dehiscence in pregnant with previous caesarean delivery. *Ann Med.* 2021;53(1):1265-69. Doi: 10.1080/07853890.2021.1959049.
- [6] Tyagi N, Prabhakar M, Tyagi S. Retrospective study to find predictive factors of scar dehiscence in previous caesarean section to prevent maternal and perinatal morbidity and mortality. *International Journal of Reproduction, Contraception, Obstetrics and Gynecology.* 2019;8(2):531-35.
- [7] Thakur G, Karmakar P, Gupta P, Saha SC. Uterine scar dehiscence: a rare cause of life-threatening delayed secondary postpartum hemorrhage- a case report and literature review. *J Obstet Gynaecol India.* 2021;71(6):629-32. Doi: 10.1007/s13224-021-01493-y.
- [8] Spong CY, Landon MB, Gilbert S, Rouse DJ, Leveno KJ, Varner MW, et al. National Institute of Child Health and Human Development (NICHD) Maternal-Fetal Medicine Units (MFMU) Network. Risk of uterine rupture and adverse perinatal outcome at term after cesarean delivery. *Obstet Gynecol.* 2007;110(4):801-07. Doi: 10.1097/01.AOG.0000284622.71222.b2. PMID: 17906012.
- [9] Landon MB, Lynch CD. Optimal timing and mode of delivery after cesarean with previous classical incision or myomectomy: a review of the data. *Semin Perinatol.* 2011;35(5):257-61. Doi: 10.1053/j.semperi.2011.05.008.
- [10] Vikhareva Osser O, Valentin L. Risk factors for incomplete healing of the uterine incision after caesarean section. *BJOG: An International Journal of Obstetrics and Gynaecology.* 2010;117(9):1119-26. <https://doi.org/10.1111/j.1471-0528.2010.02631.x>.
- [11] Edwards D, Mathur S, Flores H, Whittle W, Murji A. Uterine dehiscence: A laparoscopic uterine repair in early pregnancy. *Fertility and Sterility.* 2022;118(3):591-92. <https://doi.org/10.1016/j.fertnstert.2022.05.039>.

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