

# Abdelazim technique for repair of dehiscence previous cesarean section scars encountered during elective cesarean sections

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### ABSTRACT

The cesarean sections (CSs) rates increased worldwide (32.9% in the United States 2009). CS scar dehiscence (CSSD) is one of the complications encountered after cesarean delivery due to disruption of the scar tissue of the previous CS. CSSD is a risk factor of uterine rupture during trial of labor after previous CS. A 32-year-old woman, previous 3 CSs, admitted to the Obstetrics and Gynecology department of Ahmadi hospital, Kuwait, for elective CS. During the elective CS, the scars of previous CSs were complete dehiscence through its whole length with missing anterior uterine wall leaving visible fetal membranes underneath. This report represents a case of complete CSSD encountered during elective CS and the suggested I. Abdelazim technique for repair of dehiscence previous cesarean section scars encountered during elective CSs.

**Keywords:** Cesarean, dehiscence, I. Abdelazim, repair, scars, technique

### Introduction

The cesarean sections (CSs) rates increased worldwide (32.9% in the United States in 2009).<sup>[1,2]</sup> CS scar dehiscence (CSSD) is one of the complications encountered after cesarean delivery due to disruption of the scar tissue of the previous CS.<sup>[2,3]</sup> The incidence of the CSSD is ranging between 0.2-4.3%.<sup>[1-3]</sup> CSSD is a risk factor of uterine rupture during trial of labor after previous CS.<sup>[1-3]</sup>

This report represents a case of complete CSSD encountered during elective CS and the suggested I. Abdelazim technique for

repair of dehiscence previous cesarean section scars encountered during elective CSs.

### Case Report

A 32-year-old woman, previous 3 CSs, admitted to the Obstetrics and Gynecology department of Ahmadi hospital, Kuwait, one day before the elective CS at 38 weeks of gestation.

She signed the informed written consent for the elective CS after the pre-operative investigations and the anesthesia consultation.

She received Dexamethasone and Magnesium sulphate (MgSO<sub>4</sub>) for fetal lung and fetal neuroprotection; respectively at 32 weeks.<sup>[4-6]</sup>

The studied woman given pre-operative antibiotics according to the hospital protocol after exclusion of urinary tract infection,

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sexually transmitted diseases and group B streptococcus infection.<sup>[7]</sup>

During the elective CS and after opening of the anterior abdominal wall, the scars of previous CSs were complete dehiscence through its whole length with missing anterior uterine wall leaving visible fetal membranes underneath [Figure 1].

The urinary bladder flap dissected downwards away from the lower uterine segment (LUS) to avoid urinary bladder injury if the uterine incision extended downward.

A transverse Vicryl 0 stitch inserted after dissection of the bladder flap over the anterior wall of the LUS below the dehiscence previous scars I. Abdelazim's Stitch [Figure 2] for identification of the lower uterine flap of our CS transverse uterine incision.

A transverse uterine incision done through the dehiscence CS scars, followed by delivery of a baby boy 3.2 kg.

After delivery and complete placental separation, the upper uterine flap of our CS transverse uterine incision identified, and the lower uterine flap of our CS transverse uterine incision identified by the previously described I. Abdelazim's stitch.<sup>[2]</sup>

After identification of the two uterine flaps (upper and lower) of our CS transverse uterine incision and after removal of the I. Abdelazim's stitch,<sup>[2]</sup> the dehiscence and deficient scar tissue of the previous CSs attached to the upper and lower uterine flaps of our CS transverse incision were excised transversely and removed till proper non-deficient uterine wall reached in the upper and lower uterine flaps. Non-deficient uterine walls in the upper and lower flaps were repaired in two layers using Vicryl 0 interrupted simple stitches for the first layer and interrupted mattress stitches for the second layer (I. Abdelazim technique for repair of dehiscence previous cesarean section scars encountered during elective CSs) followed by closure of the anterior abdominal wall. The studied woman had smooth post-operative recovery

and discharged from the hospital after counseling regarding; the intra-operative findings, uterine incision, excision of dehiscence scars, method of uterine repair, and future pregnancies.

## Discussion

The CSs complication include; wound hematoma, infection and CSSD as early complications and morbid adherent placentae (MAP) and intra-abdominal adhesions as long-term complications.<sup>[8]</sup>

There is no definite and/or clear consensus regarding the mechanism behind the myometrial thinning in cases of CSSD which occurs in 0.2%–4.3% after CSs.<sup>[2]</sup>

The main complication of CSSD is uterine rupture, which reported in 0.3% during trial of labor in women with previous CS.<sup>[2]</sup>

Although, screening for CSSD during trial of labor has been reported previously,<sup>[2]</sup> the efficacy of this technique remains unknown for patients planned for elective repeat CSs.<sup>[3]</sup>

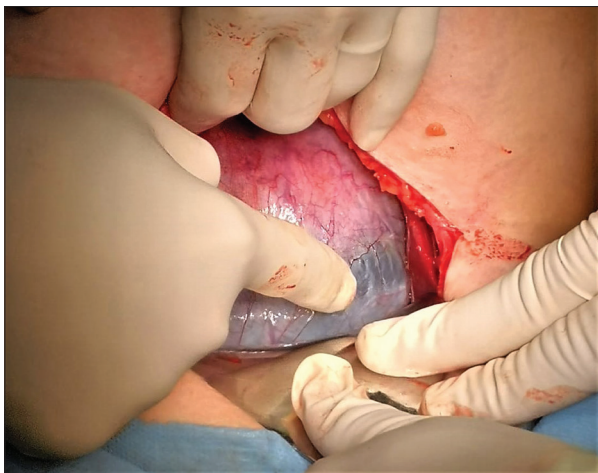
In addition, there is no consensus about the ultrasound diagnostic criteria of the CSSD, the ideal uterine incisions and time of delivery when CSSD diagnosed.<sup>[3]</sup>

The current report represents a case of complete CSSD encountered during elective CS and the suggested I. Abdelazim technique for repair of dehiscence previous cesarean section scars encountered during elective CSs.

*Sawada et al.*, reported extension of the uterine incision to the bladder and cervix during intra-operative management of CSSD.<sup>[3]</sup>

In women with CSSD although the fetus can be delivered carefully, the transverse uterine incision may extend downward to the uterine cervix and bladder or transversely to the uterine vessels.<sup>[2]</sup>

In addition; the lower flap of the transverse CS uterine incision may be retracted behind the bladder, this explains the importance



**Figure 1:** Intra-operative image shows complete dehiscence of the previous cesarean section scars



**Figure 2:** I. Abdelazim's Stitch inserted over the lower uterine segment below the dehiscence previous scars

of the I. Abdelazim`s stitch,<sup>[2]</sup> inserted over the anterior wall of the LUS below the dehiscence previous scars before the transverse uterine incision.<sup>[2]</sup>

The vertical uterine incision can be used as a protective, alternative measure in CSSD to prevent the lateral extension and/or damage to the uterine parametrium in CSSD cases.<sup>[2]</sup> However, the risk of bleeding associated with the vertical uterine incision and its potential effects on subsequent pregnancies should be considered.<sup>[2]</sup>

Although, most of the CSSD discovered during elective CSs, it is not harmful to assess the LUS of women with previous CSs using the available ultrasound facilities.<sup>[2]</sup> If the CSSD diagnosed before elective CS, the surgeon should prepare himself with the safest uterine incision with least possible complications and the best way to repair the defective or dehiscence uterine wall.<sup>[2]</sup>

Further studies needed to investigate the causes of CSSD, benefits of ultrasound in detection of CSSD in women with previous CSs, safest uterine incision and the best way to repair the defective or dehiscence uterine walls.

## Conclusion

I. Abdelazim technique is a safe technique for repair of dehiscence previous cesarean section scars encountered during elective CSs with minimal complications. The risk of bleeding associated with the alternative vertical uterine incision and its potential effects on subsequent pregnancies should be considered. If the CSSD diagnosed before the elective CS, the surgeon should prepare himself with the safest uterine incision and the best way to repair the defective or dehiscence uterine wall.

## Compliance with ethical standards

**Research involving Human Participants:** A departmental approval taken, and a written consent taken from the studied woman to publish her data for scientific activity and as a case report.

## Declaration of patient consent

The authors certify that they have obtained all appropriate patient consent forms. In the form, the patient(s) has/have

given his/her/ their consent for his/her/their images and other clinical information to be reported in the journal. The patients understand that their names and initials will not be published, and due efforts will be made to conceal their identity, but anonymity cannot be guaranteed.

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## Conflicts of interest

There are no conflicts of interest.

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