

Elective Lower Uterine Segment Caesarean Section and Bilateral Salpingectomy with BMI 76, Two Previous Caesarean Sections Including Classical Uterine Incision

¹Dimitrov-Zeller S, ¹Iyengar V, ¹Anantharachagan A

¹Fiona Stanley Hospital, Perth, Western Australia

s.dimitrov-zeller@hotmail.com



BACKGROUND

Obesity is the most common medical problem in pregnancy,¹ associated with increased complications including wound issues post Caesarean section. When performing a Caesarean section for a morbidly obese woman, alternative patient positioning, abdominal surgical access, delivery techniques, the specific use of theatre team assistants, case specific appropriate bariatric equipment and instrumentation are required for safe maternal & neonatal outcomes.

CASE

A 30-year-old, G3P2 with BMI 76 underwent an elective lower uterine segment Caesarean section (ELUSCS) and bilateral salpingectomy at 38+6/40 with an EBL of 500mL and baby born in good condition. Her antenatal booking weight was 200kg (BMI 72) though her pregnancy was otherwise uncomplicated. Her last ultrasound at 36+2/40 demonstrated EFW 2.7kg, normal dopplers and amniotic fluid volume, posterior placenta clear of cervix. Her past obstetric history was significant for one ELUSCS in 2016 followed by an elective classical Caesarean section in 2021 with difficult abdominal and uterine access. Postnatally, after her elective classical Caesarean section, she was readmitted to hospital for a course of IV antibiotics due to a collection in the subcutaneous tissues underlying the Caesarean scar. She was not diabetic and had no other significant past medical history. Multiple innovative intra-operative techniques were successfully employed to deliver the fetus.

DISCUSSION

Performing an ELUSCS on a woman with BMI 76 with history of 2 x Caesareans, one of which was a classical uterine incision, poses unique challenges. There are many intra-operative techniques that can be employed to successfully facilitate delivery of the fetus via a LUSCS by a Pfannenstiel / low transverse abdominal incision.

Positioning: The patient had two large gel positioning cylinders placed under each scapula to facilitate expansion of the chest in the supine position and a gel head ring which secured her neck was secured in place using pillows and tape. The panniculus was prepared with a significant hitch up - two triple extra-large iBands and two triple extra-large Traxis in addition to Traxi side extension stickies were used. Black silk stay skin sutures were used to further expose the incision site and to create adequate wound retraction - by utilising three judiciously placed single stay retraction sutures - one to each angle of incision and one to lower midline of the incision secured with a retraction artery clip kept to mark the incision midline. A marking pen was used to mark the area of the low incision on skin after ultrasound scan confirmed cephalic position and depth of baby below panniculus and the pubic bone's position in the midline.

Pfannenstiel incision was then made which provided subsequent access to the lower uterine segment. Previous literature has described ongoing debate regarding the ideal choice of skin incision in morbidly obese women undergoing Caesarean section.¹ It has previously been outlined that a transverse skin incision can be made above or below the pannus and has the benefits of reduced postoperative pain, improved respiratory status postpartum and increased wound strength.¹ Other literature states that low transverse skin incisions and transverse uterine incisions must be the first option, reporting them as definitely superior which was employed in this case.²

A rolled abdominal pack was unrolled and tied to the steel post fixed to the head end of the patient on the upper left edge of the bed to secure the two Lane tissue forceps applied to hold the upper edge of the rectus sheath incision. This facilitated the superior aspect of the incision to be retracted mostly without assistant support and expose the layers for surgery below and access to the peritoneal cavity as there was adiposity within those areas that also required retraction. A triple extra-large Alexis retractor was utilised for peritoneal access. Bowel was packed away with four extra-large bowel pack swabs. Two deep Deaver retractors were used; one to retract the bladder and perivesical adipose tissue from the lower segment and one to expose further the superior aspect of peritoneal access. A third assistant stood ready to assist with fundal pressure for the delivery at the left hand of the operating surgeon. A lower uterine transverse routine incision was able to be utilised for fetal delivery after dissecting peritoneal adhesions and reflecting down the bladder. Large veins were identified on both lateral aspects of the uterine incision area and tearing them was to be avoided at time of uterine incision and delivery. This was partly successful. Wrigley's forceps were prophylactically used to deliver the baby's head after fixing it and slowly releasing amniotic fluid by amniotomy. The baby was born in good condition. The lower uterine segment transverse incision was closed per routine in two layers with Vicryl 1. The angles and the single vein that tore at incision on the right lateral edge were appropriately closed off and full haemostasis achieved. Simple adhesions to the fundus and inferior aspect of the fallopian tubes on both sides were digitally resected and a bilateral salpingectomy was performed utilising the Covidien LigaSure Maryland device. Closure of rectus sheath was with Vicryl 1, fat layer with interrupted mattress Vicryl 1 sutures and skin incision using non-absorbable staples.

A drain was left in both the subcutaneous region and within the peritoneal cavity in the pelvis. Then a Prevena wound dressing was applied for prophylactic negative pressure wound therapy. It was difficult to achieve an adequate ongoing vacuum seal with the Prevena dressing so it was removed three days post Caesarean section and replaced with subsequent standard dressings with wound care nurse input. On removal of the Prevena, the patient was noted to have some oedema surrounding the wound site. Nil pus was visible and nil pus was expressed after probed with a swab which subsequently grew *Pseudomonas aeruginosa* - a five-day course of oral ciprofloxacin was added to the antibiotic regimen. The iBands and steridrape stickie dressings applied intra-operatively were left on in hospital with informed patient consent to assist with post-operative dressing care.

The patient was discharged on day four post Caesarean and subsequently had an uncomplicated postnatal period at home with nil readmissions for wound complications.

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