

Caesarean Section With Stunningly Minimal Blood Loss, A Case Report

C Tsitlakidis, C Spyroulis, D Carolan

Citation

C Tsitlakidis, C Spyroulis, D Carolan. *Caesarean Section With Stunningly Minimal Blood Loss, A Case Report*. The Internet Journal of Gynecology and Obstetrics. 2019 Volume 23 Number 1.

DOI: [10.5580/IJGO.53709](https://doi.org/10.5580/IJGO.53709)

Abstract

Background: Caesarean section rates have increased by five times (3) since the 70s and become an epidemic in nowadays. Bleeding is the commonest complication of caesarean section leading to increased morbidity and it has a significant financial cost. Objective: We present a high risk case, of a grand multipara, with a previous caesarean and manual removal of placenta (MROP), where non-traditional (17) measures as opposed to (18) oxytocics were applied to reduce bleeding. Methods: Small skin incision, use of abdominal packs, a delay in first stage of caesarean, care to perform uterine incision and inspect its integrity, delivery of the head with flexion and placenta with uterine contraction.

Results: Minimal blood loss of sixty 60 mls. Natural birth simulation. Reduced risk of need for neonatal resuscitation and post natal maternal infections. Very good parental perception.

Conclusion: Mechanical compression of the uterus has a major role to prevent bleeding. Minimising bleeding can only improve outcome. This case clearly shows that we can significantly reduce bleeding.

INTRODUCTION

Caesarean section is a top ranking (6) procedure, with a rate of 24% in the UK and 32% in the US with a staggering fifty per cent for obese women (1). There are twenty million caesareans every year globally or one section every second (5). Bleeding is a very common complication and if it is >1500ml, it increases significantly the morbidity and mortality rate. Blood loss during Caesareans can be attributed to additional reasons apart from the ones considered for vaginal delivery (18) and probably the one that was the most disregarded so far was the uterine scar (21) with troublesome angle extensions and broad ligament hematomas. Such a laborious, difficult to repair (12) scar arises not only from a scar dehiscence or rupture but also from extensions of the incision associated with very fragile tissues in repeated caesareans, or more commonly, difficulties in head delivery in cases of prolonged and advanced labour. Risk factors have been identified for uterine scar defects and include obesity, diabetes and previous caesareans (21). It can cause or prolong bleeding and will not respond to oxytocics. We present a case where preventable features applied, mainly the uterine compression (10) in more permissible ways as reviewed in previous papers (2)(11)(12)(17). Special care was taken to prevent

extension of the uterine scar.

CASE REPORT

A 38-year-old, high risk, multiparous woman, BMI 27, gravida 6 para 5, with one previous caesarean section followed by four vaginal deliveries, one manual removal of placenta, was booked for routine elective caesarean at 38+4 weeks, following maternal request. In theatre, she had spinal anaesthesia. The scar from the previous operation looked very well healed over the years with no signs of previous infection and no need for refashioning. The procedure started with horizontal Pfannenstiel incision along the skin fold. There was only mild fibrosis under the skin. The rectus muscle fascia opened with the scalpel in the middle and there was blunt dissection after, with care not to create spaces under the skin.

The abdomen opened at the linea alba and the peritoneum, using vertical and transversal traction and blunt dissection. The Doyen retractor was placed. The findings from the uterus was a thin lower segment, as expected from previous caesarean and the multiparity, a relaxed uterus and slightly engaged head, left occiput transverse position. Bladder was high onto lower segment attached with thin, avascular

adhesions. Two large and dry, size 45 abdominal packs placed in both paracolic gutters with a gentle movement upwards and towards the abdominal wall, so care was taken to avoid uterine friction that could potentially cause bruising of the uterine muscle or even a bladder injury.

The packs were placed with an intentional use to absorb amniotic fluid and blood shed at the opening of the uterine cavity but also to apply mild uterine compression (10) onto large uterine vessels and the uterine musculature. Those packs present a significant volume (being placed more like a fist and not properly deployed) as per their own size and also being accommodated between the gravid uterus and the abdominal musculature, a quite narrow space. The way they act is by compressing the uterus from both lateral sides. In addition to that, they isolate the surgical field from small bowel loops, the omentum and the large colon on the left side thus reducing risk of bowel injury.

The uterovesical peritoneum opened and pushed away caudally. The uterus opened onto upper part of the lower segment with the scalpel, a small 2-3 cm, slightly curved incision. Two fingers inserted into the incision to allow clear fluid to drain out. We sucked the fluid by placing the suction tube inside the incision. The fluid escaped the drain, was then collected by the two previously inserted dry abdominal packs. The packs soon became wet with increased weight and volume and further mild compression onto the gravid uterus. With the drain left in situ, scissors were used to extend the uterine incision laterally and slightly upwards, with the intention to avoid extension of the uterus downwards to the uterine vessels and the ureter or even the cervical area, at the time of manipulating and rotating rather than delivering the head.

Disengagement and rotation of the head followed from occiput transverse to occiput anterior position so the occiput to present under the incision. At that point scar tissue under the rectus muscle which was a result from the previous caesarean, seemed to prevent head delivery. The surgeon maintained the occiput under the incision so the baby's head to present with the smallest diameter for delivery, the occipitobregmatic, whilst the assistant applied mild fundal pressure. In that way the occiput was guided to proceed under the uterine incision and the head delivered. The kiwi cup was not used in this case (7)(2)(17) but it would make an excellent alternative as it could offer the necessary traction and counterbalance a potential inefficacy of the applied fundal pressure. The head delivery was followed by the shoulders that were brought under the incision and delivered

to that point to start the natural birth simulation.

The baby's torso delivered slowly same as with vaginal delivery. That slow and controlled delivery allowed the baby to drain the lung fluid seen from the nostrils as the chest was compressed through the small incision. A male baby was delivered, cried at birth and following delivery was lifted and showed to mum and dad. Delayed cord clamping done. Syntocinon given 5 iu intravenous followed by high dose infusion as high risk for bleeding (13) associated with multiparity, maternal age and previous MROP. The uterine incision was checked and seemed no bleeding, therefore there was a delay in delivering the placenta till there was adequate uterine contraction. Placenta was delivered with a controlled cord traction, which is another recognised method to prevent postpartum haemorrhage (PPH).

The uterine cavity seen empty from membranes or tissues, as expected when uterine contractions delivers the placenta. The integrity of the uterine incision checked and showed slight extension onto posterior uterine wall. Such extension of the uterine scar was expected because a rotation of the head was performed prior to delivery. There was no bleeding. The apex was secured and the incision was repaired across its length in two layers. A complimentary line of stitches along the incision line was used to minimise the length of the uterine incision and to compress (20) the lower segment. That has been shown to prevent bleeding. Both adnexa were checked and found to look normal; the rectus sheath was repaired in the usual way. Normal saline WAS used to wipe the tissues under the skin and on top of repaired rectus muscle fascia and vicryl to close the fat, finally monocryl subcutaneous for the skin. Vaginal toilet was done.

DISCUSSION

The methods used were 1) Short length skin incision but adequate to deliver the head and the shoulders and care was taken not to create spaces laterally under the skin 2) The use of large, size 45, abdominal packs to apply mechanical compression onto the uterus 3) Delay in first stage of the caesarean to drain the amniotic fluid, reduce the size of potential collections, keep procedure dry throughout its course 4) Uterine incision cutting with scissors slightly upwards laterally 5) Delivery of the head with flexion 6) Inspection of the scar after baby delivery to check bleeding from extensions 7) Delivery of placenta when uterine contraction 8) Natural Birth Simulation 9) Improved parental perception, through talking and inviting couple to

observe delivery. The procedure finished with a blood loss measured and recorded that only 60 mls. Blood was taken on day 2 and the results attributed to the minimal intraoperative blood loss plus the lochia for the two days post delivery. Taking into account the high risk for PPH due to multiparity, and being a caesarean section, the non-traditional methods applied with the intention to eliminate bleeding. The result justified our methods as being successful. The minimal blood loss was associated with reduced risk of postnatal infection. The Natural birth simulation also minimised the need for neonatal resuscitation. Parental couple seen at recovery room and on day 1 and 2 and satisfaction rate was high.

CONCLUSION:

Any effort to minimise bleeding during Caesarean sections can only improve the outcome (15),(16),(22). The role of the mechanical compression (10)(4) to keep the procedure free from bleeding throughout its course was shown clearly in this case. By presenting this case, we prove that eliminating blood loss in caesarean section is feasible (2).

References

1. Committee on Obstetric Practice. American College of Obstetricians and Gynecologists. Committee Opinion, 2015; No. 549: 1-4..
2. RCOG World Congress 2018 Christos Tsitlakidis Consultant obs and gynae March 21-24, 2018, Singapore Bleeding during Caesarean, can we eliminate it. <http://epostersonline.com/rcog2018/node/315>
3. Hellman L, Pritchard J, Wynn R, Williams Obstetrics, Fourteenth Edition, Butterworths London, 1970
4. Lourou K, 1927, Obstetrics : Second Edition ,Makris&Sia, Athens
5. World Counts, 2018, Be Fruitful and Multiply (online) available at www.theworldcounts.com/stories/how-many-babies-are-born-each-day#WlfnpDNSeyE.email
6. Surgical operations and procedures statistics – Statistics Explained. https://ec.europa.eu/eurostat/statistics.../Surgical_operations_and_procedures_statistics
7. Vacuum-assisted cesarean section, Ross W McQuivey and Jon E Block, Int J Womens Health 2017;9 151-155. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5348074/>
8. CNN, 2013, Baby Watch, Not Just Royal [online] available at; www.edition.cnn.com/2013/07/22/health/worldwide-baby-facts/index.html
9. Prevention and Management of Postpartum Haemorrhage <https://youtu.be/GqPjwO8qg94>
10. Dr C.Tsitlakidis, 23-24 August 2018,EuroSciCon, Annual Conference on Gynaecology, Obstetrics and Reproductive Health, Amsterdam, , Uterine Compression :Old and New Dialogues for PPH. https://www.slideshare.net/slideshow/embed_code/key/7GTb1RjZdwlwrV
11. Dr C.Tsitlakidis, 23-24 August 2018,EuroSciCon,Annual Conference on Gynaecology, Obstetrics and Reproductive Health, Amsterdam, , Caesarean Section : The Aesthetic Approach. https://www.slideshare.net/mobile/slideshow/embed_code/key/9hN0yPkIhwnZh9
12. Dr C.Tsitlakidis, 23-24 August 2018,EuroSciCon, Annual Conference on Gynaecology, Obstetrics and Reproductive Health, Amsterdam, , Revise the Caesareans,save women lives. https://www.slideshare.net/mobile/slideshow/embed_code/key/tN0A9FDFR84jCU
13. Caesarean Section / Guidance and Guidelines/NICE. <https://www.nice.org.uk/guidance/cg132/ifp/chapter/having-the-caesarean-section-operation>
14. Emotional Healing After a Cesarean | VBAC.com. <https://www.vbac.com/cesarean-section-and-birth-trauma/>
15. Ten-year follow-up of the effect of the B-Lynch uterine compression suture for massive postpartum hemorrhage.Tsitlakidis C1, Alalade A, Danso D, C.B Lynch. <https://www.ncbi.nlm.nih.gov/pubmed/17566568>
16. Lynch surgical technique for the control of massive postpartum. <https://obgyn.onlinelibrary.wiley.com/doi/pdf/10.1111/j.1471-0528.1997.tb11471.x>
- 17.CTsitlakidis. Modifying The Caesarean Section, A Contemporary Approach. The Internet Journal of Gynecology and Obstetrics.2018 Volume 22 Number 1. DOI: 10.5580/IJGO.53525
- 18.WHO guidelines for the management of postpartum haemorrhage http://whqlibdoc.who.int/publications/2009/9789241598514_eng.pdf
- 19.MBRRACE-UK Maternal Report 2018 - Web Version.pdf, <https://lnkd.in/dpSiWYG>
- 20.New Technique for Caesarean Section, T. R. Vejnović, S. D. Costa, and A. Ignatov,GeburtshilfeFrauenheilkd. 2012 Sep; 72(9): 840–845. doi: [10.1055/s-0032-1315347]
- 21.Cesarean scar defect: a prospective study on risk factors, AJOG.ORG,November 2018 Volume 219, Issue 5, Pages 458.e1–458.e8, Riitta M. Antila-Långsjö, MD; Johanna U. Mäenpää, MD, PhD; Heini S. Huhtala, MSc; Eija I. Tomás, MD, PhD; Synnöve M. Staff, MD, PhD. <https://doi.org/10.1016/j.ajog.2018.09.004>
22. Development of Asherman syndrome after conservative surgical management of intractable postpartum haemorrhage Ciaran A. Goojha, M.D., Allison Case, M.D., and Roger Pierson, M.S., Ph.D.FertilSteril. 2010 Aug; 94(3): 1098.e1–1098.e5.doi: 10.1016/j.fertnstert.2010.01.078

Author Information

Christos Tsitlakidis

Consultant Obstetrician and Gynaecologist, Raigmore Hospital, NHS Highlands
Scotland, UK

Christos Spyroulis

Registrar Obstetrics and Gynaecology, London North West University Healthcare NHS Trust

Daniel Carolan

Senior House Officer, Raigmore Hospital, NHS Crampian