

Massive Keloid Scar post-Caesarean Section: Counselling on Delivery options & Surgical challenges

Authors: Dr Wan Idoracaera Calisa binti Ikhwan, Miss Hoda Elmoniry, Miss Nuha Yassin, Dr Aligha Purushothaman

Objective

This case report explores the challenges of managing a high-risk pregnancy complicated by a massive keloid scar secondary to a prior caesarean section. It examines the challenges of counselling for Mode of delivery; vaginal birth (VBAC) versus elective caesarean section (ELSCS), the surgical approach to entry and closure of the abdominal wall and the importance of timely antenatal multidisciplinary involvement.

Key factors contributing to keloid formation in C-section scars:

Genetic Predisposition

Immune Response Dysregulation

Fibroblast Activation and Collagen Synthesis

Aberrant Wound Healing

Mechanical Factors

Growth Factors and Cytokines

Histology: Sections show a nodular dermal scar with focal thick hyalinised keloidal collagen bundles. The lesion reaches the resection margins. There is no evidence of malignancy.

Case Report

A 35-year-old G2P1 woman of Nigerian descent with a BMI of 28 presented at 40+2 weeks' gestation with a history of one caesarean section for fetal compromise. The caesarean section scar healed with a massive keloid scar that required three revisions by plastic surgery in-between pregnancies. During the current pregnancy, the keloid grew further forming a large fungating mass extending throughout the lower abdomen down to the Mons pubis. The mass has dimensions of **33 cm width, x 15 cm length and up to 4 cm depth**.

During the first and second trimester, the keloid scar was missed by the obstetric team. At 36+3 weeks, the keloid scar was identified in the antenatal clinic. She had a macrocosmic baby. The patient requested VBAC and was admitted at 40+1 for Induction of Labour. At 40+2 weeks, She was seen by the obstetric team including the consultant on delivery suite. The keloid scar was explored thoroughly. The patient was re-counselled about the mode of delivery including

- The risk of emergency caesarean section during VBAC delivery which would require swift entry into the abdomen. The keloid scar will delay this entry resulting in fetal compromise
- The risk of acquiring a vaginal tear or needing an episiotomy which will likely heal with a large keloid interfering with the patient's sexual life and normal defecation

The patient opted for an elective caesarean section. A MDT discussion on the day was arranged among the obstetric consultant, the plastic surgeon and the general surgeon. The operation was carried out jointly by the obstetric consultant and the general surgery consultant due to unavailability of the plastic surgeon on the day.

Intraoperatively, the anterior abdominal wall entry was carried out transversely through the middle of the keloid using monopolar diathermy. This is to avoid incising unscarred skin and development of another keloid. A haemostatic approach was ensured to reduce the risk of infection and poor healing. The duration from knife-to-skin to knife-to-uterus took *30 minutes*. The baby was delivered in a good condition. Saline wash of the abdomen and pelvis was carried out. Estimated blood loss was 700 mls. The parietal peritoneum was closed, The rectus muscle was approximated with prolene sutures, the rectus sheath with Loop PDS and Subdermal tissue with Monocryl 3-0. The hard solid keloid edges were approximated with glue. A Mefix water resistant dressing was applied. IV Abx were prescribed for 48 hours and the patient was discharged on Day 2 with a referral to skin plastics.



Discussion

This is a rare case of massive keloid during pregnancy. Inspection of the abdomen and Assessment of the keloid antenatally is vital. Early planning and multidisciplinary team collaboration including plastic surgery is essential to provide comprehensive antenatal counselling, safe surgical planning and delivery, and to ensure an optimum recovery with a good quality of life for the mother. Counselling for VBAC in this case requires an individualized risk assessment approach with discussion of the additional risks involved; the development of new keloids at the site of perineal tears, the barriers to swift entry to the abdominal cavity in the case of an emergency, and post-operative scar complications.

Conclusion

Managing high-risk pregnancies with Massive keloid scarring demands proactive planning, multidisciplinary teamwork, and surgical expertise. This case highlights the value of timely decision-making and comprehensive care protocols in mitigating maternal and neonatal risks while improving long-term quality of life.