Frimley Health
NHS Foundation Trust

Uterine Rupture

Key Points

- Uterine rupture occurs rarely with an overall rate of 0.2 per 1,000 maternities
- Early diagnosis and emergency laparotomy are required to reduce associated morbidity and mortality

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Abbreviations

CTG	Cardiotocography
FH	Fetal heart
PPH	Postpartum haemorrhage

Introduction

Uterine rupture involves the uncommon complication of a complete tear through the myometrium and serosa of the uterus. It may occur in an intact or previously scarred uterus via previous caesarean section or previous myomectomy. Partial separation or dehiscence, and windows or healing defects have also been described. It can occur during and before labour.

The incidence of uterine rupture is 0.2 per 1000 (0.02%) maternities overall.[1] This incidence is increased in women who have had a previous caesarean section; 5 per 1,000 (0.5%) with a planned vaginal birth, and 2 per 1,000 (0.2%) with a planned elective caesarean. Two or more caesarean deliveries, an interval of less than 12 months since their caesarean delivery, induction of labour and the use of oxytocin all increase the odds of rupture.

Risk factors [1,2,3,4,5,6,7,8]

- Previous uterine scar (from previous caesarean section or other uterine surgery such as myomectomy)
- Prolonged use of oxytocics in previous scar
- Multiparity
- Prolonged labour with dystocia (especially with macrosomic baby and/or grand multiparity)
- Inappropriate use of oxytocics in the case of dystocia
- Uterine hyperstimulation (with or without oxytocic use)
- Malpresentation
- Congenital uterine anomaly
- Previous uterine instrumentation (in case of undiagnosed perforation)
- External trauma such as road traffic accident.

Early diagnosis

- Pain is a generally poor indicator of scar rupture; however, constant pain and severe pain being elicited by palpation over the scar site should arouse suspicion.
- An abnormal CTG with persistent variable decelerations may be indicative of imminent scar rupture.
- Abnormal vaginal bleeding
- Blood-stained urine on bladder catheterisation (blood in urine may suggest rupture involving the bladder).
- Maternal tachycardia (pulse rate higher than systolic blood pressure)
- Fetal tachycardia
- Maternal vomiting

Late diagnosis

- Deterioration of maternal condition leading to cardiovascular collapse with hypotension (rare)
- Generalised tenderness of the abdominal wall
- Palpable fetal parts
- Presenting part moved higher or impalpable on vaginal examination
- Bradycardia / absent FH
- Sudden absence of uterine contractions
- Postpartum PPH not responding to oxytocics

Management

If uterine rupture is suspected, then emergency laparotomy is indicated following resuscitation of the patient as appropriate.

An obstetric emergency call (2222) should be made. The consultant obstetrician and obstetric anasesthetist should be called. Theatres should be notified and the protocol for a category 1 Caesarean section should be employed.

Stop oxytocin if in progress, ensure adequate IV access is in place (2 x 16 gauge cannulae, i.e., grey, as woman likely to be haemodynamically unstable), send FBC and crossmatch 4 units of blood. Insert catheter if not in place already and apply an hourly urometer.
Once the baby is delivered, the extent of the scar dehiscence or rupture should be assessed and discussed with the consultant obstetrician on call if he or she is not already present in theatre.

Uterotonics should be used in accordance with the Trust's guideline for management of postpartum haemorrhage.

The operation of choice is caesarean section with repair of the rupture site and conservation of the uterus. Feasibility of uterine conservation is dependent on the site and extent of rupture and degree of blood loss as well as achievement of haemostasis.

Hysterectomy should be employed in cases where conservation of the uterus is not achievable. This is a consultant decision and the procedure should be undertaken in the presence of a consultant obstetrician. Subtotal hysterectomy should be considered as it has a lower mortality than total hysterectomy.[8]

Prophylactic antibiotics should be administered according to Trust Microguide for caesarean section.

Thromboprophylaxis should be given according to Trust guideline for Thromboprophylaxis and the treatment of Venous Thromboembolism in Pregnancy and the Puerperium.

A risk management form should be completed in all cases of uterine rupture.

All patients having had a uterine rupture should have a consultant appointment at 6 weeks postnatally for debrief with documentation of the complication and a plan for future pregnancies/deliveries.

Monitoring

This guideline will be monitored via incident reporting and risk management review.

Communication

If there are communication issues (e.g., English as a second language, learning difficulties, blindness/partial sightedness, deafness) staff will take appropriate measures to ensure the patient (and her partner, if appropriate) understand the actions and rationale behind them.

Equality Impact Assessment

This policy has been subject to an Equality Impact assessment.

References

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This guideline has been registered with the Trust. However, clinical guidelines are guidelines only. The interpretation and application of clinical guidelines will remain the responsibility of the individual clinician. If in doubt, contact a senior colleague or expert. Caution is advised when using guidelines after the review date.
This guideline is for use in Frimley Health NHS Foundation Trust hospitals only. Any use outside this location will not be supported by the Trust and will be at the risk of the individual using it.

Version History

Version	Date	Guideline Lead(s)	Status	Comment
1.0	Sept 2016	A Kirkpatrick, Consultant Obstetrician	Final	First cross-site guideline
2.0	June 2020	H Walker, O&G Consultant	Final	
2.1	Feb 2024	Anne Deans, Chief of service, O&G	Draft	Scheduled review.
3.0	May 2024	Anne Deans, Chief of service, O&G	Final	Approved at Cross site Obstetric Clinical Governance Meeting 21/5/24

Related Documents

None