University Hospitals Sussex
NHS Foundation Trust

Prevention of Acid Aspiration Syndrome

Maternity Protocol: MP043

Date agreed: July 2021

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Version:	4
Approval Committee:	Women's Services Safety and Quality Committee
Date agreed:	July 2021
Review date:	July 2024
Cross reference:	**MP050** Caesarean Section

Contents

Key Principles

A protocol is a set of measurable, objective standards to determine a course of action. Professional judgement may be used in the application of a protocol.

Scope

This protocol applies to:

- All women in labour

Responsibilities

Midwives, Obstetricians & Anaesthetists:

- To access, read, understand and follow this guidance
- To use their professional judgement in application of this protocol

Management Team:

- To ensure the protocol is reviewed as required in line with Trust and National recommendations
- To ensure the protocol is accessible to all relevant staff

1 Background

Late pregnancy and labour are associated with a particularly increased risk of acid aspiration for a number of reasons: these include reduced rate of gastric emptying secondary to pain and opiates, a reduction in the barrier pressure at the lower oesophageal sphincter secondary to hormonal effects, and an increased intragastric pressure from the presence of the gravid uterus. Women with significant heartburn or obesity are at particular risk.

2 Prevention of gastric acid aspiration:

All women who require peri-partum anaesthesia for operative delivery or other procedures, such as, but not limited to:

- Trial of instrumental delivery in theatre
- Caesarean
- MROP
- Repair of perineal tear
- Cervical suture

should be managed with a neuraxial anaesthetic technique, unless specific contra-indications apply, such as:

- Maternal refusal of regional anaesthesia
- Significant clotting abnormalities
- Severe maternal or foetal compromise necessitating general anaesthesia

2.1 Rapid Sequence Induction techniques should be considered for any pregnant woman or person requiring surgery in the second trimester, and must be used from 20 weeks gestation and up to 48 hours post delivery.

2.2 Reducing the risk in labour

2.2.1 Low risk women in active labour progressing normally do not require antacid prophylaxis (please see Table 1) and may eat and drink as desired.

2.2.2 Women whose active labour is not progressing normally or who have been identified as high risk for surgical intervention (see Table 1) should receive oral omeprazole 20 mg daily and metoclopramide 10mg orally 8 hourly throughout labour.

2.2.3 Labouring women who have been identified as high risk for either a difficult intubation or for aspiration should receive regular omeprazole and metoclopramide as above throughout labour (see Table 1).

2.3 Table 1: Low risk and High Risk factors for intervention or aspiration in active labour

Low Risk	**High Risk**
Fetal maturity (37 and 42 weeks)	BMI >40 at booking
Spontaneous onset	Known or predicted difficult airway
Singleton fetus	Hiatus hernia
Cephalic presentation	Severe heartburn during pregnancy requiring regular medication (e.g. frequent Gaviscon)
Normal maternal observations	Hypertension/ pre-eclampsia
Normal fetal heart rate	Known fetal abnormality, IUGR
Acceptable progress in labour	Multiple pregnancy
Clear liquor	Malpresentation or position
Maternal age between 16 and 40	Poor obstetric history / Previous caesarean section
	Maternal medical conditions: diabetes mellitus, heart disease, renal disease etc.
	Abnormal fetal heart rate detected
	Previous shoulder dystocia
	Previous 3rd stage problems
	Previous APH
	Meconium stained liquor
	Maternal age under 16 or over 40
	Abnormal maternal observations
	Abnormal progress in labour
	High head in labour
	Previous anaesthetic problem
	Vaginal bleeding
	Drug misuse
	Grand multi-parity

2.3.4 The following group of women should be encouraged not to eat, & to limit oral intake to water, clear squash or isotonic sports drinks during active labour:

- BMI > 40 at booking
- Multiple pregnancy
- Breech presentation
- Oxytocin for augmentation
- Abnormal cardiotocograph / fetal scalp pH
- Significant meconium staining of liquor
- Some labourers with epidural analgesia (discuss with anaesthetist)*

*Not everyone with epidurals will be at increased risk of surgical intervention. The anaesthetist should decide whether the patient needs to be given regular antacid

prophylaxis and be restricted to clear fluids only at the time of insertion of the epidural.

2.4 Reducing the risk in elective caesarean section:

2.4.1 All women scheduled for elective caesarean section should receive oral omeprazole 20mg before going to bed the night before the scheduled procedure (@ approx. 22:00) and again the next morning before leaving home to come to the hospital. Metoclopramide 10mg will be given on labour ward on arrival

2.4.2 Women should be encouraged to drink clear fluids up until 2 hours before the scheduled time for their procedure. This may include non-fizzy energy drinks.

2.4.3 If General Anaesthesia is required, the mother should receive sodium citrate 0.3M 30mls prior to induction of anaesthesia.

2.5 Reducing the risk in emergency caesarean section

2.5.1 Women who require an emergency caesarean section during labour should receive omeprazole 20mg PO or pantprazole 40mg IV and Metoclopramide (10mg/IV) if not taken orally within the last 6 hours, as well as 30mls Sodium Citrate 0.3M.

2.5.2 Consideration should be given to emptying the stomach with a large bore orogastric tube after securing the airway with a cuffed oral endotracheal tube if the woman has eaten a meal within the last 6 hours.

2.5.3 Consideration should be given to Ultrasound assessment of the gastric antrum where there is any doubt regarding the sufficiency of gastric emptying if expertise to do so is available.

3 Summary Table

Low Risk of Aspiration/Surgical Intervention in Labour	High Risk of Aspiration/Surgical Intervention in Labour
• No antacid prophylaxis • Normal diet	• omeprazole 20mg orally daily • Metoclopramide 10mg orally 8 hourly throughout labour • Consider light diet or NBM

Elective Caesarean Section	Emergency Caesarean Section
omepraole 20mg orally(22:00, 07:00) • Metoclopramide 10mg orally (22:00, 07:00) • If GA required, give sodium citrate 0.3M 30mls • NBM for 6hours, and clear fluids until 2hr before procedure	• 30mls Sodium Citrate 0.3M • Pantoprazole 40mg IV • Metoclopramide 10mg IV (unless already given within 6hours before caesarean section)

4 References

Raising the standard, section 8.5: 3rd edition RCOA (2012)

NICE Caesarean section April 2004

PRACTICE GUIDELINES FOR OBSTETRIC ANAESTHESIA an updated report by the American Society of Anaesthesiologists Task Force on Obstetric Anaesthesia* (Last amended on October 18, 2006) http://www.asahq.org/publicationsAndServices/OBguide.pdf