Antacid Prophylaxis for High Risk Pregnant Women

1. Introduction

1.1 Gastric emptying is reduced during labour. This is significant after the administration of opioid analgesics. (NICE 2007) The increased residual gastric volume increases the risk of aspiration of gastric contents if vomiting or passive regurgitation occurs.

1.2 The purpose of this guideline is to reduce the likelihood of gastric aspiration and to decrease the volume and acidity of the residual gastric contents in labour and prior to elective caesarean section.

2. Definitions

Word/Term	Descriptor
High Risk Women	are women who may have an obstetric history or medical co-morbidities that would place them at an increased incidence of Obstetric intervention or have additional risk factors for aspiration of gastric contents

3. Roles and Responsibilities

Post/Group	Details	Resources	Review/ Monitoring	Implementation	Records	Reporting
Midwives, support staff, Obstetricians, anaesthetist	• following this and associated policies/procedures • utilise the information within this guideline to provide the best evidence and practice • take reasonable care of self and others	x		x		
Gloucestershire Birth Forum	• Responsible for review and amendment • Monitoring effectiveness of policy • Audit and actions		x			
GOGG (Gloucestershire Obstetric Guidelines Group)	• Approval and maintenance • Implementation		x		x	
Maternity Clinical Governance	• Ratification • Outstanding audit actions					x

4. Care of High Risk Women in Labour

4.1 High risk women who have not had any systemic opioids:

- Once in established labour, mothers should be encouraged to drink high glucose, non-particulate (i.e. clear) drinks such as fruit squashes as desired
- Those with a high risk of operative delivery within the next two hours should be restricted to sips of water only and be nil by mouth as soon as a decision is made for surgery

4.2 High risk women who have been given pethidine or a bolus of epidural Fentanyl greater than 50 mcg:

- Should be restricted to small quantities of non-particulate (i.e. clear) fluids or water only.

4.3 Prevention of aspiration in high risk labouring women:

Ranitidine 150 mg orally or ranitidine 50 mg i.v. (slowly) if urgent; prior to theatre, thereafter oral dose every 6 hours if necessary. (NICE 2007, NICE 2004, Task Force Obstetrical Anaesthesia 2007)

The following high risk women should be started on prophylactic antacid therapy

- Previous caesarean section / uterine scar
- Previous retained placenta
- Breech
- Multiple pregnancy
- Pre-eclampsia
- Diabetes mellitus
- Morbid obesity - BMI greater than 40 (body mass index = weight / height^2 [kg/m^2] - use pre-pregnant weight)
- IUGR / poor biophysical profile
- Trial of labour (use discretion)

The regimen should be initiated in labour if the following are identified:

- APH / abruption
- Fetal distress / fetal scalp blood sampling
- Failure to progress (use discretion)
- Pre-eclampsia identified during labour

4.4 Once a decision has been made that the woman will require an anaesthetic then sodium citrate 30 mL should be given orally immediately before induction of anaesthesia.

5. Prevention of Aspiration in Cases of Planned Surgical Intervention[3]

5.1 All patients with symptomatic heartburn, and patients from 20 weeks gestation to 3 days postpartum must be covered with antacid prophylaxis and include a rapid sequence induction technique if general anaesthesia is given.

5.2 Elective Procedures

- No oral intake of solid food (including milk and chewing gum) for 6 hours pre-op.
- Clear, non-particulate fluids can be drunk until 2 hours pre-op.
- Ranitidine 150 mg orally at 22:00 night before
- Ranitidine 150 mg orally at 07:00
- Sodium citrate 0.3M 30 mL (at discretion of the anaesthetist)

Delayed cases
Consider giving the patient water if the delay is likely to exceed 2 hours.
If a case is delayed until the afternoon an additional dose of ranitidine may be needed.

5.3 Emergency procedures

- Sodium citrate 0.3M 30mL orally in theatre
- If no oral Ranitidine has been given give Ranitidine 50mg i.v.

6. Management of Suspected Aspiration of Gastric Contents[4]

Signs suggestive of aspiration:

Early:

- regurgitation with unprotected airway
- gastric contents in tracheal tube or aspirate
- unexplained coughing, hypoxaemia, laryngospasm, bronchospasm, wheeze or crackles

Late:

- hypoxaemia
- fluffy infiltrates on CXR (immediately or within 24 hours)

7. Treatment

7.1 During anaesthesia

- Call for senior help
- Prevent further aspiration – consider:
  - lateral position, head down tilt
  - cricoid pressure
  - tracheal intubation
  - tracheal aspiration
  - gastric aspiration
  - awake extubation

- Additional measures – consider:
  - increasing the concentration of oxygen administered
  - inhaled bronchodilator
  - bronchoscopy if solid food particles

7.2 Post-operatively

- Discuss with on call consultant anaesthetist
- CXR
- supplemental O_2 to maintain saturations over 94%
- refer to HDU/ITU for CPAP $\pm$ tracheal intubation if saturations poor or respiratory distress
- consider
  - physiotherapy
  - bronchoscopy to relieve airway obstruction if food particles inhaled

- no evidence for steroids or prophylactic antibiotics
- antibiotics only if clinical signs of infection
- unless complete recovery after 2 hours, i.e. no symptoms or signs, no increased oxygen requirement, then observe for 48 hours with repeat CXR

8. Dissemination

8.1 The Practice Development Midwife will inform all staff when this guideline has been uploaded and individuals are expected to make themselves aware of the guideline content via the intranet store.

9. Monitoring of Compliance

9.1 This list is not exhaustive and additional criteria may be included at the Trust discretion

9.2 The audit will include the current CNST level 3 Maternity standards and sample size if related

9.3 Sample sizes selected will be dependent on the cohort size. The data collection period will be identified by the Maternity Audit / CNST Lead

9.4 Action plans will be developed and reviewed as required by the instigating body

9.5 The audit will be carried out using the standardised audit tool and methodology as agreed by the maternity audit team and in line with the audit process.

9.6 The audit results will be presented to the multidisciplinary Obstetrics and Gynaecology Audit presentation meeting.

9.7 Where deficiencies are identified, an action plan will be developed by the author, following the Multidisciplinary Obstetrics and Gynaecology Audit presentation meeting. These action plans are implemented and monitored by the Associated Forum.

9.8 Audits are undertaken as routine triennially, however if deficiencies are identified or changes implemented, audit will be undertaken sooner.

		Monitoring of Compliance				
Source		**Criteria (Objective to be measured)**	**Monitoring Methodology**	**Lead Responsible**	**Time scales**	**Reporting arrangements**
local	i	Compliance with guideline	As part of audit program	Birth Forum	Triennially	Birth Forum

10. References

CG55 Intrapartum care: NICE guideline 2007

CG13 Caesarean section: NICE guideline 2004

Task Force on Obstetrical Anesthesia. Practice Guidelines for Obstetric Anesthesia. Anesthesiology 2007; 106:843–63

Crisis management during anaesthesia: regurgitation, vomiting, and aspiration
M T Kluger, T Visvanathan, J A Myburgh, R N Westhorpe. Qual Saf Health Care 2005;14:e4

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Authors	Version	Reason for review	Ratified
Louis Khor Consultant Anaesthetist	Version 1 May 2009	New guideline	Gloucestershire Obstetric Guideline Group (GOGG)
Louis Khor Consultant Anaesthetists	Version 2 December 2012	Triennial Review	Gloucestershire Obstetric Guideline Group (GOGG)

Gloucestershire Hospitals NHS
NHS Foundation Trust

EQUALITY IMPACT ASSESSMENT

INITIAL SCREENING

1. Lead Name : Kirsty Davis
Job Title : Practice Development Midwife

2. Is this a new or existing policy, service strategy, procedure or function?
New Existing ✓

3. Who is the policy/service strategy, procedure or function aimed at?
Patients Carers Staff ✓ Visitors
Any other Please specify:

4. Are any of the following groups adversely affected by this policy:
If yes is this high, medium or low impact (see attached notes):

Disabled people:	No	✓	Yes	
Race, ethnicity & nationality:	No	✓	Yes	
Male/Female/transgender:	No	✓	Yes	
Age, young or older people:	No	✓	Yes	
Sexual orientation:	No	✓	Yes	
Religion, belief & faith:	No	✓	Yes	

If the answer is yes to any of these proceed to full assessment.
If the answer is no to all categories, the assessment is now complete.

Date of assessment: 4.6.09 Completed by: K.L. Davis
Signature: Job title: PDM
Director: Signature:

This EIA will be published on the Trust website. A completed EIA must accompany a new policy or a reviewed policy when it is confirmed by the relevant Trust Committee, Divisional Board, Trust Director or Trust Board. Executive Directors are responsible for ensuring that EIA's are completed in accordance with this procedure.