Document Control

Title			
Maternal Pyrexia in Labour Guideline			
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CONTENTS

KEY POINTS

NICE defines pyrexia in labour as a temperature ≥38°C on a single reading or ≥37.5°C on two consecutive readings 1 hour apart.

Maternal temperature in labour should be checked at least 4-hourly in all care settings.

On average the fetal temperature is one degree higher than the maternal. During labour, maternal pyrexia is linked with increased incidence of neonatal seizures and encephalopathy and neonatal deaths (RCOG, 2012).

Clinical interventions may increase temperature. However, the cause for maternal pyrexia cannot be assumed and infective causes must be considered. Screen for Sepsis and follow the Sepsis in Maternity Guideline.

Transfer to Labour Ward for Obstetrician-led care if labouring at home.

Commence continuous electronic fetal monitoring if IA (intermittent auscultation) utilised.

1. Purpose

1.1. This document details the management of maternal pyrexia in labour.

2. Definitions

2.1. Maternal pyrexia is defined as a temperature of ≥37.5°C on 2 occasions 1 hour apart OR one temp of ≥38°C (National Institute for Health and Care Excellence (NICE) 2019).

3. Responsibilities

3.1. All women with pyrexia in labour should receive prompt and effective assessment and treatment involving the multi-disciplinary team (Mothers and Babies: Reducing Risk through Adults and Confidential Enquiries across the UK (MBRRACE), 2014).

4. Management of Maternal Pyrexia in Labour

4.1. Diagnosing Maternal Pyrexia in Labour

While clinical interventions may increase temperature (see 4.2), the cause for maternal pyrexia cannot be assumed and infective causes must be considered. It is imperative that the long term impact of maternal pyrexia on the fetus takes primary focus when diagnosing and treating maternal pyrexia in labour. Refer also to section 2 definition and Sepsis in Maternity Guideline.

4.2. Relevant factors and Common sources.

Maternal pyrexia in labour is linked with increased incidence of neonatal seizures, encephalopathy and death. It is a high risk marker for neonatal GBS infection and cerebral palsy (Royal College of Obstetricians and Gynaecologists (RCOG), 2012).

On average fetal temperature is one degree higher than maternal; it has been suggested that reducing maternal pyrexia may protect against neonatal encephalopathy.

Therefore immediate action to reduce maternal temperature is imperative, in addition to screening to exclude any infectious cause of the pyrexia.

Maternal pyrexia in labour may be associated with chorioamnionitis and/or coincidental maternal infection e.g. urinary tract or upper respiratory tract infection. Misoprostol, epidural anaesthesia and use of water for pain relief may be linked to a rise in maternal temperature. Primiparous women are more susceptible to pyrexia; they are more likely to have prostin inductions, longer labours, epidural and multiple vaginal examinations.

4.3. Assessment

Routine assessment of maternal observations in labour will trigger criteria for maternal pyrexia in labour as follows-

One temperature of ≥38°C

- commence Sepsis 6 immediately
- follow red flag pathway in the Sepsis in Maternity Guideline (Appendix A Maternal Sepsis tool).

On the **first** finding of a **temperature of ≥37.5°C**,

- document a full set of maternal observations on the MEOWS chart
- complete the actions listed in 4.4.2.1

If the **second** check one hour later notes a **temperature of ≥37.5°**C -

- urgent Obstetric (middle tier or above) assessment -

- take a thorough and concise history; consider recent exposure, any risk factors and other potential causes.
- note clinical concerns, any MEOWS trigger and fetal tachycardia.
- document a clear plan in the mother's notes.

- follow amber flag pathway in the Sepsis in Maternity Guideline (Appendix A Maternal Sepsis tool).
- start antibiotics if there is a clinical suspicion of sepsis, do not wait for blood results.
- Within one hour of the initial Obstetric assessment-
  - Obstetrician to review urgent bloods and relevant tests
  - Clear plan to be documented in the mother's notes.

N.B if the second check one hour later notes a temperature <37.5°C-

- high clinical concern for fetal wellbeing should be maintained
- continue one hourly frequency of a full set of maternal observations documented on the Modified Early Obstetric Warning Score (MEOWS) chart and refer to the Maternal Sepsis tool.
- have a low clinical threshold for intervention where other maternal observations are abnormal

4.4. Treatment

- **One temperature of ≥38°C**
  Commence Sepsis 6 immediately and follow the red flag sepsis pathway in the Sepsis in Maternity Guideline.

- **Temperature of ≥37.5°C on 2 occasions 1 hour apart –**

FIRST OCCASION - Temperature of ≥37.5°C

- Respond *immediately* with measures to bring the temperature down -
  - Paracetamol 1g. Administer intravenously, if the woman does not have a cannula in situ this should be inserted with consent.
  - Increase fluids; oral, and intravenous fluids as prescribed.
  - Tepid sponge; using tepid water and with the woman's consent, wipe the woman's body to assist peripheral cooling.
  - Remove blankets, use oscillating fan and where appropriate open window

SECOND OCCASION - Temperature of ≥37.5°C

- Screen for sepsis.
  - Refer to the Sepsis in Maternity Guideline (Amber category).
  - Send bloods urgently.
  - Review blood results within one hour of taking.
- Transfer to Labour Ward for Obstetrician-led care if labouring at home.
- Commence continuous electronic fetal monitoring if IA (intermittent auscultation).

4.5. Monitoring and subsequent assessment

Monitoring of maternal temperature and observations-

- Repeat a full set of maternal observations 1 hour after the second check.
  - where temperature does not respond to treatment and remains ≥37.5°C
    - continue cooling measures (4.4.2.1)
    - Obstetric review and plan. Consider treatment as per Sepsis 6 (if not already commenced).
    - continue hourly observations (full set) on MEOWS chart
  - where temperature responds to treatment and is <37.5°C-
    - repeat temperature check 2 hours later
    - if maternal temperature remains <37.5°C resume 4 hourly checks
  - resume hourly checks if –
    - maternal temperature ≥37.5°C recurs at any stage
    - clinical signs indicate a concern e.g. offensive liquor, maternal/fetal tachycardia, maternal rigors.
- Inspect cannula site, any wound sites and epidural site.
  Document findings in appropriate Trust proforma and liaise with relevant Multi-disciplinary Team (MDT).

- Inform the duty Paediatrician of all relevant data for a neonatal sepsis assessment. This should be noted as a risk factor in the neonatal notes and plan. Refer to Sepsis Management Guidelines for Neonates

4.6. Intervention in Labour, Delivery and Pain Relief

- Decision on timing and mode of delivery should be made by a Consultant Obstetrician following discussion with the woman. Given the high incidence of HIE and cerebral palsy with maternal pyrexia, a low threshold should be taken.

- Fetal Scalp Electrode (FSE) and Fetal Blood Sampling (FBS) may be considered with caution. In the presence of an abnormal Cardiotocograph (CTG), FBS can be falsely reassuring, discuss with Consultant Obstetrician.
- Epidural/spinal anaesthesia may be considered in women with pyrexia in labour. Discuss with the Anaesthetist on-call.
- Preterm delivery; the decision for steroids should be undertaken by a senior obstetrician in conjunction with the paediatric team.
- If antepartum and/or pre-term antibiotic prophylaxis is already in progress, convert to broad spectrum intrapartum prophylactic antibiotics.

4.7. Follow-up and Postnatal Management

Any women who have been treated for pyrexia in labour should have been informed of her diagnosis and treatment in addition to having appropriate referral and follow-up discussion for the neonate.

5. Monitoring Compliance with and the Effectiveness of the Guidance

Process for Implementation, Monitoring Compliance and Effectiveness

5.1. An up to date copy of this guideline is available to all staff on the Trust intranet. As a matter of routine, this guideline will be reviewed triennially by the Maternity Services Guideline group.

5.2. Reporting for non-compliance and review of effectiveness of the guideline will be identified through the risk process within maternity and led by appointed maternity Risk leads. The maternity services audit process will include review of this guideline. All versions of these guidelines will be archived in electronic format by the author within the Maternity Team policy archive. Any revisions to the final document will be recorded on the Document Control Report. To obtain a copy of the archived guidelines, contact should be made with the Maternity team.

6. References

- National Institute for Health and Care Excellence. Intrapartum care for healthy women and babies. NICE. London, CG190, 2015 (updated 2017).

- National Institute for Health and Care Excellence. Intrapartum care for women with existing medical conditions or obstetric complications and their babies. NICE. London NG121, 2019.
- Royal College of Obstetricians and Gynaecologists. Bacterial sepsis in pregnancy (Green-top Guideline No. 64a). Royal College of Obstetricians and Gynaecologists. 2012.

7. Associated Documentation

Sepsis Management Guidelines (early and late onset) for Neonates

Patients at Risk of deterioration (PAR) policy

Indications for Antibiotics During Labour Including Prevention of Group B Streptococcal Infection Guidelines

Pre-Labour Rupture of Membranes (PROM) at Term Guidelines

Preterm Prelabour Rupture of Membranes (PPROM) Guidelines

Preterm Labour Management Guidelines