Standard Operational Procedure for the Management of Suspected Fetal Macrosomia

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1. Purpose/Background:

Macrosomia is suspected if the Estimated Fetal Weight (EFW) is above 90th centile on the customised growth chart or >4.5kg at term. The delivery of a macrosomia baby is associated with prolonged labour, an increased likelihood of operative delivery, shoulder dystocia and infants that weigh at least 5kg have increased infant mortality rates.

The purpose of this document is to provide guidance for the management of suspected macrosomia.

Risk Factors for Fetal Macrosomia

- Maternal diabetes
- Maternal impaired glucose intolerance
- Multiparity
- Previous macrosomic infant
- Prolonged gestation
- Maternal obesity
- Excessive weight gain
- Male baby
- Parental stature
- Need for labour augmentation
- Prolonged second stage
- Maternal age (>35 years)

2. Scope:

This document is for use of all health care professions involved in the care of pregnant women including midwives, General Practitioners, Obstetricians and Sonographers.

3. Responsibilities

It is the responsibility of all Midwifery Nursing and medical staff to:

- Access read understand and apply this SOP
- Attend any mandatory training pertaining to the SOP

It is the responsibility of the department to:

- Ensure the SOP is reviewed as required in line with trust and national recommendations
- Ensure the SOP is accessible to all relevant staff

4. Procedure:

4.1 Diagnosis of Suspected Macrosomia

If Symphysis–fundal height (SFH) measurement is above the 90th centile on the customised growth chart, a referral should be made to the antenatal clinic for consultant review. The consultant should decide if referral for growth scan is required based on clinical history and repeated SFH measurements.

4.2 Management following ultrasound diagnosis of Suspected Fetal Macrosomia

4.2.1 Antenatal Care

- If macrosomia is suspected in a non-diabetic woman <30 weeks gestation, arrange OGTT (Oral Glucose Tolerance Test) within 1 week.
- Refer to the Diabetic Antenatal Clinic (ANC) if result of OGTT is abnormal.
- The patient should be under consultant led care. The decision for further growth scans should be made according to individual clinical situation.

4.2.2 Timing and Mode of Delivery

- The risks and benefits of Induction of Labour (IOL) must be discussed with the woman. Hence IOL at term can be considered for fetal macrosomia from the consultant ANC if the EFW on USS is above 4kg (9lb).
- Arrange consultant clinic appointment to discuss induction of labour and mode of delivery if EFW of the baby > 4 kg (Timing of this needs to be discussed with the woman and should include a discussion about the risk of shoulder dystocia at different fetal weights rather than simply centiles. An estimate of risks at different weights is:
    - 5% (1 in 20) in birthweight of 4000g – 4250g (8lb 13oz to 9lb 6oz)
    - 9% (1 in 12) in birthweight of 4250 – 4500g (9lb 6oz to 9lb 15oz)
    - 14% (1 in 7) in birthweight 4500 – 4750g (9lb 15oz to 10lb 7oz)
    - 21% (1 in 5) in birthweight 4750g – 5000g (10lb 7oz to 11lb)

- IOL proforma found in the Pink hand held record should be completed in full.
- If woman declines IOL and wants to consider expectant management repeat scan in 2 weeks to reassess growth. If size increases beyond 5 kg elective caesarean section is recommended in non-diabetic women.

4.3 Diabetic women

- Infants of diabetic mothers have a two to four fold increased risk of shoulder dystocia compared with infants of the same birth weight born to non-diabetic mothers.
- Elective caesarean section should be considered to reduce the potential morbidity for pregnancies complicated by pre-existing or gestational diabetes, regardless of treatment, with an estimated fetal weight of greater than 4.5 kg.

4.4 Management in Labour

When a woman with suspected fetal macrosomia is admitted in labour, the following should take place.

- IV access, Full Blood Count and Group &Save
- Inform registrar
- Vigilance and monitoring for slow progress in first stage due to risk of labour dystocia or cephalopelvic disproportion
- Obstetric registrar present on labour ward for second stage of labour
- Neonatal team in attendance at delivery
- Early recourse to caesarean section if there is no descent of the presenting part
- Active management of third stage

4.5 Follow up

- All women that have a shoulder dystocia will be under Consultant led care for her next pregnancy.
- All women that give birth to a macrosomia infant will have diabetic screening in her next pregnancy.

5 Implementation/training/awareness

- This is a review of a current document and it formalises current practice.
- Once ratified it will be available in all clinical areas within the Maternity Unit and on the intranet.
- All new, reviewed and ratified documents are notified to staff via the monthly maternity newsletter

6. Auditable Standards

What aspects of compliance with the document will be monitored	What will be reviewed to evidence this	How and how often will this be done	Detail sample size (if applicable)	Who will coordinate findings	Which group or report will receive findings
US baby weight v actual weight of babies whose mothers are induction for macrosomia	Maternal noted	6 monthly	10 sets of notes	Audit Midwife	MCSG

7. Related Documents:

Guidelines/SOP:

- SOP- Antenatal care
- SOP- Fetal Growth

8. References:

- Boulvain M, Irion O, Dowswell T, Thornton JG. Induction of labour at or near term for suspected fetal macrosomia. Cochrane Database Syst Rev2016;5:CD000938.pmid:27208913
- RCOG Green-top Guideline No. 42 Shoulder Dystocia ; 2nd edition | March 2012(2) Management of large-for-gestational-age pregnancy in non-diabetic women
- NICE Guideline NG3. Diabetes in pregnancy. Augst 2015

9. DISCLAIMER

It is the responsibility of staff to check the Trust intranet to ensure that the most recent version/issue of this document is being referenced.

DOCUMENT HISTORY					
Date of Issue	**Version No.**	**Next Review Date**	**Date Approved**	**Director Responsible for Change**	**Nature of Change**
24th Sept 2013	1.0	24th Sept 2016	24th Sept 2013	Dr Htwe	Approved at Maternity CSG
April 2017	2.0	Nov 2019	April 2017	Amanda Pearson	Approved at Maternity CSG
Aug 2020	SOP v1	August 2023	26th August 2020	MCSG	Converted, Reviewed and Ratified