Wrightington, Wigan and Leigh Teaching Hospitals
NHS Foundation Trust

Title of Guideline	Big Baby : Management of LGA fetus
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Target Audience	Maternity ward,clinics and A&E staff
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.	

Version Control

Version	Date	Amendment
1	Sep 25	Guideline created following completion of the “Big Baby” Clinical Trial (published May 2025)

1. Scope

1.1. The guideline is applicable to all women and birthing people who access maternity services and aims to support midwives, obstetricians and other members of the multi-disciplinary team to provide consistent care to women and birthing people when the foetus is expected to be large for the gestational age(LGA:>90th centile)

2. Aim

2.1. The purpose of this guideline is to review the current evidence regarding associated antenatal and intrapartum risk factors and the management of large for gestational babies.

3. Introduction

3.1. The number of large babies is on the increase. This trend has been attributed to increases in maternal height, body mass, gestational weight gain, diabetes, reduced cigarette smoking and changes in socio-demographic factors.

3.2. The definition of a macrocosmic foetus or large for gestational age (LGA) foetus is ambiguous and varies across the literature. NICE (2021) state that foetal macrosomia describes a baby that is believed to be large for its gestational age, with an estimated foetal weight above the 95th percentile, at or after 36 weeks of pregnancy.

3.3. Macrosomia (variably defined as fetal weight of more than 4·0 kg or more than 4·5 kg) and the fetus being large for gestational age (LGA; >90th percentile) are associated with an increased risk of shoulder dystocia.

3.4. Various ways have been used to define macrosomia over the years, including >4kg, >4.5 kg, or > 90th or 95th population-based centile. The Perinatal institute recommend using >90th customised GROW centile, based on recent studies that have shown that customised centiles improve the identification of macrosomia that is associated with pathological outcome (GAP/grow).

3.5. Birthweight over 4000g is associated with increased risks of assisted vaginal birth, postpartum haemorrhage and perineal injury. For the neonate, there is an increased risk of shoulder dystocia and the associated consequences such as and neonatal brachial plexus injury (BPI).

3.6. Detection of LGA is an important aspect of antenatal care that is usually done alongside surveillance for small size for gestational age and fetal growth restriction. Standard screening in the UK is by serial assessment and plotting of fundal height and, if indicated by size or trajectory of the growth curve, referral for ultrasound biometry and estimation of fetal weight. In pregnancies at increased risk of growth disorders (eg, in women with diabetes) serial assessment by ultrasound is recommended

3.7. Earlier delivery of an LGA fetus should reduce the baby's birthweight, mitigating the risk of shoulder dystocia.

3.8. A 2016 Cochrane review of trials of induction of labour found a reduced risk of shoulder dystocia associated with induced deliveries compared with expectant management (risk ratio [RR] 0·60 [95% CI 0·37–0·98]).[8]

3.9. A 2017 systematic review, however, found that this reduction did not reach statistical significance (RR 0·57 [95% CI 0·30–1·08]).

3.10. Both reviews included data from the same four trials and a total of 1190 participants, and their conclusions were largely driven by results of the largest trial, by Boulvain and colleagues (with 817 participants), which included babies with a birthweight higher than the 95th estimated fetal weight (EFW) percentile and found that induction from 37 weeks' gestation reduced the incidence of severe shoulder dystocia compared with expectant care

3.11. Because of emerging evidence of potential long-term consequences of early-term deliveries, and the continued view in contemporary guidelines that induction of labour does not prevent shoulder dystocia in non-diabetic mothers with a suspected macrosomic fetus, Perinatal Institute led by Dr Gardosi conducted a randomised controlled trial (BIG BABY) to investigate the potential benefits and harms of induction of labour from 38 weeks' gestation to reduce the risk of shoulder dystocia and provide data to help pregnant women with suspected large babies (and their clinicians) make better informed choices

3.12. **Exclusion criteria:** Pregnant women who fall into below categories:
- 3.12.1. multiple pregnancy
- 3.12.2. non-cephalic presentation
- 3.12.3. receiving drug treatment (with insulin or oral hypoglycaemics) for diabetes or gestational diabetes
- 3.12.4. induction being contraindicated
- 3.12.5. elective caesarean section or induction already planned or indicated for any reason
- 3.12.6. planned home birth
- 3.12.7. being a prisoner
- 3.12.8. a current diagnosis of a psychiatric disorder that required treatment with antipsychotic medication
- 3.12.9. previous stillbirth
- 3.12.10. inability to give informed consent
- 3.12.11. the foetus having a known serious abnormality.

3.13. Women with drug treated diabetes were excluded because of the recommendation by the National Institute of Health and Care Excellence (NICE) to routinely offer induction between 37 weeks' gestation and 38+^{6} weeks' gestation.

4. Procedure

4.1. For Patient at Low Risk of FGR, standard screening recommended is serial fundal height (SFH) assessment as per the NW FGR guideline.

4.2. 1st plot of SFH >90 centile is not an indication for scan as per GROW as it is a non-specific finding, and can be raised due to various maternal, factors eg raised BMI, Fibroids etc

4.3. When the SFH trajectory suggest accelerated growth on GROW, patient should be sent for a growth scan to estimate fetal weight (EFW) to rule out increased liquor or LGA fetus.

4.4. Patients who are classed as moderate and high risk of FGR have serial ultrasound scans for growth as per the NW FGR and additional scans as triggered by GROW for accelerated growth to rule out increased liquor or LGA fetus.

4.5. If the scan shows the EFW >90th Centile, then LGA is diagnosed.

4.6. If The EFW is <90th Centile the woman continues her routine antenatal care as per the NW FGR guideline.

4.7. **Antenatal Care once LGA fetus Diagnosed**

4.8. If EFW is greater than 90th centile (LGA) and/or increased Liquor Volume(MPD >=10cm).

4.9. Refer to Consultant clinic. Arrange for GTT if not already done within 4 weeks. If GDM is confirmed refer to diabetes ANC (See Diabetes in pregnancy guideline).

4.10. **Counselling Women without Gestational diabetes mellitus) GDM and with LGA fetus.**

4.11. Clinical foetal weight estimation is unreliable and third-trimester ultrasound scans have at least a 10% margin for error for actual birth weight and a sensitivity of just 60% for macrosomia (over 4.5 kg).

4.12. **The Big Baby Research Trial** conducted in UK recruited individuals whose EFW was higher than the 90th percentile at 35+⁰ to 38+⁰ weeks' gestation to identify and recommend management of LGA fetus where pregnancy is not complicated with GDM (Gestational diabetes mellitus).

4.13. **What should be the mode of birth for suspected foetal macrosomia?**

4.14. Women with an LGA fetus on GROW at 35 week scan or a later scan, should be provided with information about the potential risks to both the woman and infant . Management options including **expectant care**, **induction of labour** and **planned caesarean birth should be discussed**(see the NICE guideline on caesarean birth)**.**

4.15. **Discuss limitations of scan, pros and cons of Expectant management, Induction of labour(IOL), and caesarean section.**

4.15.1. **First**, they should be made aware that ultrasound assessed foetal weight is an estimate only, with substantial margins of error.

4.15.2. **Second**, the potential short-term and long-term risks and benefits should be discussed with regard to the different delivery pathways.

4.15.3. **Third**, this study supports previous reports that, compared with delivery at 39 weeks' gestation or later, earlier delivery can reduce the risk of shoulder dystocia. However, this benefit can be reached without needing to induce before 38 weeks' gestation, and without affecting neonatal outcome including need for phototherapy.

4.16. The findings of the study, as well as its limitations, provide information that can be communicated to pregnant women with a suspected LGA foetus, to assist them in making choices about mode and timing of their delivery by giving them a (patient information leaflet)

4.16.1. If the woman opts for Expectant Management Antenatal care continues as normal (can be referred to MW care if no other risk factors.

4.16.2. It is generally considered a **low-intervention, safe approach** in the absence of complications or other risk factors.

4.17. If the woman opts for IOL, The timing of the IOL should be agreed between the woman and her consultant depending on the estimated foetal weight, the woman's concerns, and the centile, and vaginal assessment. However IOL should not be before 38/40 due to lack of any further benefit in achiving safe delivery

4.18. If the woman opts for Caesarean Birth Advise the woman that in the absence of any other complications, a caesarean is recommended after 39/40. This is based on multiple factors: foetal maturity, balancing maternal and foetal risks, Guideline-based care (Both NICE (UK) and international guidelines recommend scheduling planned caesareans at 39+0 weeks, unless earlier delivery is clinically indicated).

4.18.1. Discuss with the woman her options if she goes into labour prior to the planned caesarean date.

4.19. Recommend Elective Caesarean if the EFW is ≥ 5 kg. Most national guidelines (e.g., RCOG) recommend considering elective caesarean for estimated fetal weight ≥5 kg to prevent serious birth complications.

4.20. **Place of Birth**

4.20.1. Recommend birth in Consultant Unit if the EFW is above 90th centile on the USS.

4.20.2. If a woman chooses to birth in another birth setting, explain the risk and benefits and respect the woman's choice/refer to consultant midwife.

4.20.2.1. There is Increased risk of shoulder dystocia(complications such as brachial plexus injury (BPI), hypoxia, or fractures)

4.20.2.2. There is higher risk of obstetric intervention (Increased likelihood of induction of labour, instrumental birth, or emergency caesarean)

4.20.2.3. There is higher risk of Maternal complications (postpartum haemorrhage, perineal trauma, and prolonged labour).

4.21. **First Stage**

4.21.1. There is no evidence that continuous electronic monitoring provides any benefit compared to intermittent auscultation in women whose babies are large for gestational age. Therefore, the foetal heart should be monitored using intermittent auscultation, however, explain to the woman that if there are any concerns she might be asked to come out of the birthing pool.

4.21.2. Water birth is not contraindicated for LGA.

4.21.3. If there is a delay in first stage, a senior review including full assessment should happen before commencing Oxytocin for augmentation to confirm true delay, rule out underlying causes, prevent inappropriate use of oxytocin, optimise maternal and fetal safety and ensure informed decision-making and guideline adherence.

4.22. **Second Stage**

4.22.1. Early recourse to caesarean birth if there is no descent of the presenting part due to increased Risk of obstructed labour. Avoid unnecessary delay and **Timely decision = safer outcome**

4.22.2. Consider Instrumental delivery **in theatre based on vaginal assessment findings.** Consultant should be informed and attend if required depending on the skills and experience of the middle grade. Enables rapid management of complications (e.g., shoulder dystocia, haemorrhage, neonatal resuscitation).

4.22.3. Having a suspected LGA baby should not alter the management of second stage following the birth of the fetal head (i.e. waiting for restitution, waiting for next contraction, and attempting axial traction before declaring shoulders' dystocia).

4.23. **Third Stage**

4.23.1. Recommend active management of third stage in all birth settings due to Increased risk of postpartum haemorrhage (PPH), faster, more controlled placental delivery, maternal safety and reduced complications.

4.23.2. This reduces incidence of severe anaemia, need for transfusion, and surgical interventions (e.g., manual removal of placenta, hysterectomy in severe cases).

5. Auditable Standards

5.1. Evidence that the symphysis fundal height was accurately plotted and appropriate referral for USS.

5.2. Appropriate discussion has been documented between the woman and clinician re management of large for gestational age fetus at term.

5.3. GTT appropriately undertaken for women whose baby is noted to be LGA in the antenatal period.

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