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Second Stage of Labour & Other Pitfalls

MRCOG Part 2 Online Revision Course

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Aims & Objectives

- Cover specific topics that are generally answered poorly by MRCOG Part 2 candidates

Exam Question Topics that get answered wrong..

- VTE risk assessment – both Obstetrics & Gynaecology
- Aspirin in pregnancy
- Colposcopy / Cervical screening
- Adenomyosis
- Fibroids
- Ultrasound image based questions
- 5 year survival rates for gynaecological cancers
- **Second stage of labour**
- **Management of large for gestational age (LGA) babies**
- **Polyhydramnios**

Why is 2nd Stage a difficult topic in MRCOG Part 2?

- Candidates perform poorly at questions about management of second stage of labour
- Often answer based on personal practice rather than national guidance
- Purpose of these questions is to assess safe practice not individual skill set
- UK based examination based on UK clinical practice – avoid answering based on non-UK practice

Key Tips for Answering SBA/EMQs on 2nd stage

- Indication for intervention
 - FTP – NICE guideline
 - Presumed fetal compromise – CTG will be described for you, unlikely in question to be unclear if delivery indicated (e.g. pathological, bradycardia)
- Location for delivery – reasons to do in theatre as per RCOG OVD GTG
- Any contraindications to rotational delivery – e.g. low platelets
- Do not assume that CS is the correct answer if appears ‘difficult’ OVD – double check for contraindications in the question

Operative Vaginal Delivery

- RCOG GTG - Trial in theatre if any of:
 - maternal BMI greater than 30
 - short maternal stature
 - estimated fetal weight of greater than 4 kg or a clinically big baby
 - head circumference above the 95th percentile
 - occipito–posterior position
 - midpelvic birth or when one-fifth of the head is palpable per abdomen.

Key Tips for Answering SBA/EMQs on 2nd stage

- Questions are written with the default presumption of ventouse rather than forceps unless fetal bradycardia
- Station: +2 -> delivery in room regardless of position (!)
- Station: +1 or higher -> delivery in theatre
- Pathological CTG and station +2 -> Ventouse in room
- Bradycardia and station +2 -> Forceps in room
- Pathological CTG and station +1 or higher -> FBS **then** trial
- 1/5th palpable PA – Trial
- 2/5th palpable PA - CS



(Everyone's face when we give this talk)

Specific Second Stage Scenarios

- Maternal medical disease – indications for shortening 2nd stage
 - Tip: TOG articles ->
- Sequential instruments
- Breech at full dilation
- Second twin / internal podalic version
- FGM
- Risks of 2nd stage CS

- ** DO AS THE GUIDELINE SAYS, NOT WHAT YOU DO **



Review

Pregnancy and spinal cord injury

Rehana Dawood MBBS MRCOG ✉, Efstathios Altanis Ptychion Iatrikes MRCOG, Pura Ribes-Pastor FRCA FFARCSI MSc, Felicity Ashworth MA BM BCh FRCS FRCOG

First published: 23 April 2014 | <https://doi.org/10.1111/tog.12083> | Citations: 19



Review |  Free Access

Ocular manifestations of pregnancy and labour: from the innocuous to the sight threatening

Ajay D Patil MA (Cantab) FRCOphth, Abdallah A Ellabban FRCS MSc PhD ✉, Dilip B Patil MRCOG, David Yorston FRCOphth, Thomas H Williamson FRCOphth ... [See all authors](#) ▾

First published: 25 May 2020 | <https://doi.org/10.1111/tog.12670> | Citations: 2



Review |  Free Access

A review of stroke in pregnancy: incidence, investigations and management

Azriny S Khalid MRCPI MRCOG ✉, Adriana Hadbavna MRCPI, David Williams PhD FRCPI FRCPE, Bridgette Byrne MD FRCOG

First published: 14 November 2019 | <https://doi.org/10.1111/tog.12624> | Citations: 7

Management of Large-For-Gestational Age Babies

Inducing labour

NICE guideline

Published: 4 November 2021

www.nice.org.uk/guidance/ng207

Investigation report: Severe brain injury, early neonatal death and intrapartum stillbirth associated with larger babies and shoulder dystocia

Shoulder Dystocia

Green-top Guideline No. 42
2nd Edition | March 2012

Induction of labour for big babies



Trusted evidence. Informed decisions. Better health.

What is this review about?

Big babies (over 4000g or 9lb) can be injured at birth. Inducing labour early, before the baby grows too big, may reduce this trauma.

However, if done too early, induction can lead to babies being born prematurely and with immature organs. Also, estimating a baby's weight before birth is not very accurate, so induction will sometimes be unnecessary.

What evidence did we find?

We found four studies (randomised trials), involving 1190 non-diabetic pregnant women with suspected large babies.

This infographic shows some of the results of the review comparing pregnant women who were induced at 37 to 40 weeks with women who waited for labour to start naturally.

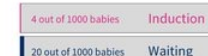
What's best for babies?

Big babies have a higher chance of being injured during birth.

Does inducing labour make a difference to the number of babies who are injured?

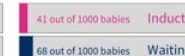
Any fracture

The baby may fracture a bone during birth, e.g. the collarbone.



Shoulder dystocia

When the baby's shoulder becomes stuck during birth.

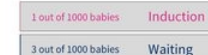


Induction of labour decreased fracture by about 16 babies per 1000.

Induction of labour decreased shoulder dystocia by about 27 babies per 1000.

Brachial plexus injury

Damage to the network of nerves that send signals to the baby's shoulder, arm and hand.



Birthweight

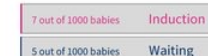


There was no clear difference between induction of labour and waiting.

On average, babies weighed 178g less when labour was induced compared with waiting.

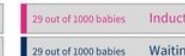
Low Apgar score

This assesses the baby's health. A low score shows that the baby may need medical attention.



Low arterial cord pH

This shows that the baby hasn't had enough oxygen during birth.



There was no clear difference between induction of labour and waiting.

There was no difference between induction of labour and waiting.



Induction of labour reduced the number of babies who had shoulder dystocia or any fracture.

There were no clear differences between groups for brachial plexus injury, low Apgar score, or low arterial cord blood pH.

Induction of labour at or near term for suspected fetal macrosomia
Bouvain M, Irion O, Dowswell T, Thornton JG
Full review: <http://ow.ly/9Kbd300ts9W>

How good is the evidence?

In all trials women and health professionals knew in advance whether induction was happening or not, which may have affected the results.

The quality of the evidence was **high** for any fracture, **moderate** for caesarean section & cord pH, and **low** for instrumental delivery, brachial plexus injury, & Apgar score.



What's best for women?

A big baby is more likely to need delivering by caesarean section or instrumental delivery (using ventouse or forceps).

Caesarean section carries risks such as infection for the mother and breathing difficulties for the baby. The mother may take longer to recover from a caesarean section than from a vaginal birth.

An instrumental delivery increases the chance of the mother having a vaginal tear, blood clot, or incontinence.

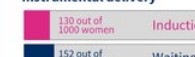
Does inducing labour make a difference to the number of women needing a caesarean section or instrumental delivery?

Caesarean section



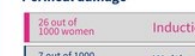
Induction of labour made no clear difference to caesarean section.

Instrumental delivery



Induction of labour made no clear difference to instrumental delivery.

Perineal damage



Induction of labour may increase the number of women with severe perineal tears.



Induction of labour made no clear difference to the number of women who needed a caesarean section or an instrumental delivery.

There is limited evidence that more women in the induction of labour group had severe perineal damage.



There appear to be benefits from induction, but there may also be some disadvantages. The option should be discussed with parents when their baby is suspected to be big.

We need more trials to find out the best time to induce labour towards the end of pregnancy, and how to identify big babies more accurately.



The project was supported by the National Institute for Health Research, via Cochrane Infrastructure and Cochrane programme Grant (13199/05) funding to Cochrane Pregnancy and Childbirth. The views and opinions expressed therein are those of the authors and do not necessarily reflect those of the Systematic Reviews Programme, NIHR, NHS or the Department of Health.

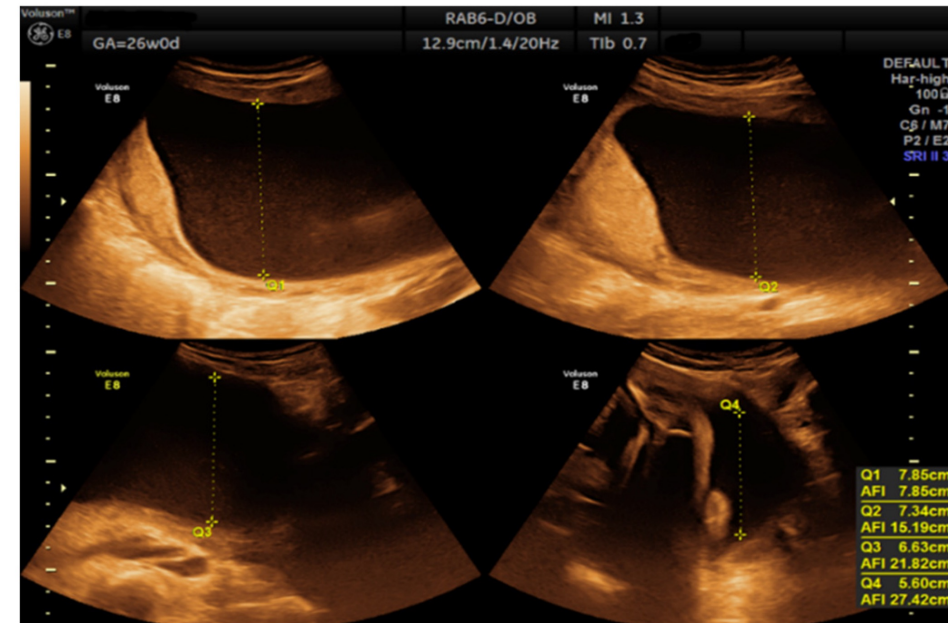
Infographic by Helen West, Research Associate, Cochrane Pregnancy and Childbirth
E: h.west@liverpool.ac.uk T: [@CochranePCG](https://twitter.com/CochranePCG) pregnancy.cochrane.org

Management of Large-For-Gestational Age Babies

- There is no national definitive guidance
- RCOG has commissioned a scientific impact paper but this is postponed pending the results of the NIHR Big Baby study
- The exam is not likely to ask questions that where the evidence is unclear
- Look carefully in the question for leading statements e.g. *“The woman wishes to avoid perineal trauma and is concerned about the risk of shoulder dystocia”*
- NICE is clear: offer a choice of expectant management, early term IOL or planned CS for EFW >95th
- If question is for EFW >90th but <95th then answer as if not LGA

Polyhydramnios

- **Prevalence:** 1 in 100 pregnancies.
- **Ultrasound diagnosis:**
 - The vertical measurement of the deepest pocket of amniotic fluid free of fetal parts is used to classify polyhydramnios into mild (8–11 cm), moderate (12–15 cm) and severe (≥ 16 cm).
 - In about 80% of cases the polyhydramnios is mild, in 15% moderate and in 5% severe.
 - Most cases of mild polyhydramnios are idiopathic, but most cases with moderate or severe polyhydramnios are due to maternal or fetal disorders.
 - In most cases, polyhydramnios develops late in the second or in the third trimester of pregnancy



Polyhydramnios

- There are essentially two major causes of polyhydramnios:
 - **Reduced fetal swallowing:** due to brain abnormalities (e.g. anencephaly, Dandy-Walker malformation), facial tumors, gastrointestinal obstruction (e.g. esophageal or duodenal atresia, small bowel obstruction), compressive pulmonary disorders (e.g. pleural effusions, diaphragmatic hernia, CPAM, CHAOS), narrow thoracic cage due to skeletal dysplasias), and fetal akinesia deformation sequence (due to neuromuscular impairment of fetal swallowing).
 - **Increased fetal urination:** maternal diabetes mellitus and maternal uremia (increased glucose and urea cause osmotic diuresis), hyperdynamic fetal circulation due to fetal anemia (e.g. red blood cell isoimmunization or congenital infection), fetal and placental tumors (e.g. sacrococcygeal teratoma, placental chorioangioma), or twin-to-twin transfusion syndrome.

Polyhydramnios

- **Investigations:**

- Detailed ultrasound examination – specifically check fetal swallowing, stomach bubble, bladder and kidneys, MCA Dopplers to check for anaemia, cardiac function (high output failure)
- Glucose tolerance test
- Invasive testing for karyotyping and array if there are fetal abnormalities or growth restriction. DNA testing for the myotonic dystrophy mutation if there is abnormal posturing of the extremities.
- TORCH test if there are fetal features suggestive of infection.

Polyhydramnios

- **Delivery:**

- Standard obstetric care and delivery in most cases.
- Fetal abnormalities: induction of labor at 38 weeks' gestation in a hospital with neonatal intensive care and facilities for pediatric surgery.
- Severe polyhydramnios: controlled induction and membrane rupture at 38 weeks' gestation to avoid risk of umbilical cord prolapse.

- **Prognosis:**

- This depends on the cause of polyhydramnios and the gestational age at delivery.

- **Recurrence:**

- Idiopathic: no increased risk.
- Associated maternal or fetal conditions: depends on the cause.

Polyhydramnios

- Some tips:
 - If question on polyhydramnios – define the severity and try and work out the cause
 - Management is based on the CAUSE
 - Don't assume that IOL is indicated for mild/moderate idiopathic polyhydramnios – it's not in any guideline
 - TORCH screening is generally obsolete in clinical practice
 - If asked what the next investigation is for mild/moderate polyhydramnios, glucose tolerance testing if not already done
 - If asked what the next investigation is for severe polyhydramnios with normal GTT, amniocentesis

Polyhydramnios

- Some tips:
 - The combination of SGA fetus and significant polyhydramnios is concerning
 - Severe polyhydramnios carries a 1 in 10 chance of an underlying chromosomal/genetic condition – for AFI >40 / DVP >16cm, offer amniocentesis
 - Amniodrainage is rarely indicated unless severe polyhydramnios with maternal compromise – it carries a 1 in 4 risk of preterm labour and should be done with steroid cover and preferably after 32 weeks gestation
 - Exam questions are highly unlikely to ask the average MRCOG candidate to make a ‘decision’ for amniodrainage – definitely subspecialist level and outside the remit of the exam

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