Where EFM is considered abnormal before the active second stage, caesarean delivery is recommended unless the buttocks are visible or progress is rapid. Fetal blood sampling of the buttocks although technically possible, is not recommended.

Evidence level 4

6.4 *Where should vaginal breech birth take place?*

Birth in a hospital with facilities for immediate caesarean section should be recommended with planned vaginal breech birth, but birth in an operating theatre is not routinely recommended.

D

Labour complications, including the need for caesarean section in up to 45% of women, are more common with breech presentation.[4,14]

Evidence level 2–

No studies have looked at the effect of delivery in theatre versus delivery in a labour room on the outcome of labour. However, transfer from the relative familiarity of the labour room to theatre is likely to increase stress in the mother. Birth in water is not recommended due to the lack of gravity and difficulty anticipated if intervention during breech delivery is required.

Evidence level 4

6.5 *What guidelines should be in place for the management of breech birth?*

Women should be informed that adherence to a protocol for management reduces the chances of early neonatal morbidity.

C

The essential components of planned vaginal breech birth are appropriate case selection, management according to a strict protocol and the availability of skilled attendants.

✓

Evidence from a number of retrospective studies shows that vaginal breech birth is more successful in women where strict guidelines for selection are used.[34,43]

Evidence level 2–

A Cochrane review of expedited versus conservative approaches to breech delivery found no studies that address this issue.[44] Accepted principles, however, are established. These include assisted breech delivery rather than breech extraction and continuous support for and communication with the mother.

Evidence level 3

6.6 *Management of the first stage and passive second stage*

Adequate descent of the breech in the passive second stage is a prerequisite for encouragement of the active second stage.

D

The first stage of labour should be managed according to the same principles as with a cephalic presentation. To reduce the risk of cord compression, amniotomy is reserved for definite clinical indications. Where the progress is slow, caesarean section should be considered. In the presence of epidural analgesia and a contraction frequency of fewer than four in ten, however, oxytocin may be considered. A passive second stage to allow the descent of the breech to the perineum prior to active pushing is recommended.[14] If the breech is not visible within 2 hours of the passive second stage, caesarean section should normally be recommended.

Evidence level 2–

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6.7 *What position should the woman be in for delivery during a vaginal breech birth?*

Either a semirecumbent or an all-fours position may be adopted for delivery and should depend on maternal preference and the experience of the attendant. If the latter position is used, women should be advised that recourse to the semirecumbent position may become necessary. ✓

There are limited data in relation to position and outcome of delivery in vaginal breech birth. Comparison of an upright position with historical data is favourable,[45] with the rate of maternal perineal injuries being lower. In a cephalic presentation, an upright position is associated with a shorter second stage.[46] Compared with the dorsal supine position, the all-fours position considerably increases pelvic dimensions on magnetic resonance imaging.[47] Delivery with the woman in a forward-facing position (squatting or all fours) is the position favoured by many experienced operators[40] claiming, particularly, that it is easier to observe for signs that the delivery will be more difficult. Evidence level 3

The principal difficulty with an all-fours position is when manoeuvres are required. Most obstetricians are more familiar with performing these in a difficult breech birth with the woman in the dorsal position. If a woman chooses a forward-facing position, they should be made aware that if interventions are required, they may be given assistance to move into a dorsal recumbent position. Manoeuvres in an all-fours position can be performed, however,[40] and if the operator has the skills of undertaking the manoeuvres with the mother in a forward position these should be performed without delay. Evidence level 4

6.8 *What are the principles for the management of active second stage and vaginal breech birth?*

Assistance, without traction, is required if there is delay or evidence of poor fetal condition. ✓

All obstetricians and midwives should be familiar with the techniques that can be used to assist vaginal breech birth. The choice of manoeuvres used, if required to assist with delivery of the breech, should depend on the individual experience/preference of the attending doctor or midwife. ✓

While involuntary pushing may occur earlier, encouragement of maternal effort should not start until the breech is visible. Once the buttocks have passed the perineum, significant cord compression is common. Traction should also be avoided; a 'hands-off' approach is required, but with appropriate and timely intervention if progress is not made once the umbilicus has delivered or there is poor tone, extended arms or an extended neck. Tactile stimulation of the fetus may result in reflex extension of the arms or head, and should be minimised. Care must be taken in all manoeuvres to avoid fetal trauma: the fetus should be grasped around the pelvic girdle (not soft tissues) and the neck should never be hyperextended. Selective rather than routine episiotomy is recommended.

Signs that delivery should be assisted include lack of tone or colour, or delay, commonly due to extended arms or an extended neck. In general, intervention to expedite breech birth is required if there is evidence of poor fetal condition or if there is a delay of more than 5 minutes from delivery of the buttocks to the head, or of more than 3 minutes from the umbilicus to the head.

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The semirecumbent position

There is little comparative evidence regarding techniques of assisted breech delivery. If the back starts to rotate posteriorly, gentle rotation without traction should be used to ensure that it remains anterior. Once the scapula is visible, the arms can be hooked down by inserting a finger in the elbow and flexing the arms across the chest or, if nuchal, Lovset's manoeuvre is advised. Delivery is achieved either with the Mauriceau-Smellie-Veit manoeuvre or with forceps. Suprapubic pressure will aid flexion if there is delay due to an extended neck. Delivery using the Burns-Marshall technique is not advised due to concern of over extension of the fetal neck.

An alternative is the routine use of the Bracht manoeuvre, a mode of delivery favoured in Europe and in the PREMODA study.[14] Following spontaneous delivery to the level of the umbilicus, the body is grasped in both hands keeping the legs flexed against the baby's abdomen and, without traction, is brought up against the symphysis pubis, frequently accompanied by suprapubic pressure.

Evidence level 3

The all-fours position

The limited evidence suggests[21,45] that spontaneous delivery without assistance will occur more often. The technique and manoeuvres, if required, are described in detail in an article by Evans.[40]

Evidence level 4

7 Management of the preterm breech

7.1 How should preterm singleton babies in breech presentation be delivered?

Women should be informed that routine caesarean section for breech presentation in spontaneous preterm labour is not recommended. The mode of delivery should be individualised based on the stage of labour, type of breech presentation, fetal wellbeing and availability of an operator skilled in vaginal breech delivery.

C

Women should be informed that caesarean section for breech presentation in spontaneous preterm labour at the threshold of viability (22–25^{+6} weeks of gestation) is not routinely recommended.

C

Women should be informed that planned caesarean section is recommended for preterm breech presentation where delivery is planned due to maternal and/or fetal compromise.

✓

Breech presentation is more common preterm and most preterm deliveries are unplanned as a result of spontaneous preterm labour. Adequate high-quality evidence in relation to the management of preterm breech birth has proved impossible[48] and the evidence regarding term breech should not be extrapolated directly to preterm breech delivery. Rates of perinatal morbidity and mortality are higher following preterm delivery, irrespective of the mode of delivery.

Evidence level 3

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A Cochrane systematic review assessed the effects of planned immediate caesarean section versus planned vaginal birth for women thought to be in preterm labour with a singleton (cephalic or breech presentation).[49] Data were very limited on clinically relevant outcomes and confidence intervals were wide, but there were no significant differences with respect to immediate outcomes and no significant differences between the two groups for abnormal follow-up in childhood. Maternal puerperal pyrexia was significantly more likely in the caesarean section group (RR 2.98, 95% CI 1.18–7.53), but there were no other significant differences in maternal morbidity outcomes.

A systematic review and meta-analysis of nonrandomised studies assessing vaginal delivery versus caesarean section in preterm breech delivery included seven studies involving a total of 3557 women.[50] The primary outcome was neonatal mortality. Preterm birth was defined as a gestational age of 25^{+0} up to 36^{+6} weeks, and studies published before 1980 or defined by low birthweight rather than gestational age were excluded. The weighted risk of neonatal mortality was 3.8% in the caesarean section group and 11.5% in the vaginal delivery group (pooled RR 0.63, 95% CI 0.48–0.81). Mortality differences varied according to study setting with the largest study of 2674 women in Sweden demonstrating a halving of neonatal mortality with caesarean section.[51]

Several retrospective cohort studies have evaluated the relationship between low birthweight and breech delivery. Muhuri et al.[52] reported that very low birthweight breech or malpresenting fetuses delivered by a primary caesarean section had significantly lower adjusted relative risks of neonatal death compared with those delivered vaginally. Demirci et al.[53] reported no difference in neonatal complications between vaginal delivery and caesarean section for babies with birthweights of less than 1000 g or more than 1500 g, but reported an increased mortality associated with vaginal delivery for babies with birthweights of 1000–1500 g. A population-based study of preterm low birthweight (less than 2500 g) newborns in California reported significantly increased neonatal mortality with vaginal delivery compared with caesarean section in all birthweight groups and increased birth trauma in babies with birthweights of 1500–2500 g.[54] However, the caesarean section rate was 86%, suggesting that few vaginal breech deliveries are conducted and experience may be limited. A further study of survival and morbidity for the breech fetus at the threshold of viability (23^{+0} to 24^{+6} weeks of gestation and 400–750 g birthweight) had similar proportions of vaginal and caesarean deliveries.[55] Caesarean delivery was associated with a survival benefit across all birthweights, but morbidity was higher in the caesarean section group. It has been suggested that the lower gestational age of breech babies in a preterm cohort may account for the apparently increased mortality and morbidity.[56]

Evidence level 2–

Up to 25% of all preterm deliveries are iatrogenic due to antenatal complications, such as pre-eclampsia, fetal growth restriction and antepartum haemorrhage.[57] For women requiring planned delivery for maternal and/or fetal compromise with a viable fetus in breech presentation, elective caesarean section is recommended.

Evidence level 4

Although the majority of obstetricians use caesarean section for the uncomplicated preterm breech, only a minority believe that there is sufficient evidence to justify this policy.[48] There is general acknowledgement that the retrospective studies cited above which suggest that caesarean section confers a better outcome in this situation have been subject to selection bias.[58,59] The poor outcome for very low birthweight infants is mainly related to complications of prematurity and not the mode of delivery.[60]

Evidence level 2–

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In the absence of robust evidence that a preterm baby presenting by the breech needs to be delivered routinely by immediate caesarean section, the decision about mode of delivery should be made by an experienced obstetrician following a thorough clinical evaluation, and in consultation with the woman and partner.[61] The stage of labour is critical: the course of preterm labour may be protracted and unpredictable, immediate caesarean section may lead to earlier delivery than vaginal and might hinder the effect of steroids or prevent the use of magnesium. Likewise, it is prudent to reassess the patient in theatre immediately prior to caesarean section in order to avoid the unfortunate situation where the uterus is found to be empty with the fetus already delivered vaginally.[62]

Evidence level 4

7.2 *How should labour with a singleton preterm breech be managed?*

Labour with a preterm breech should be managed as with a term breech. C

Where there is head entrapment, incisions in the cervix (vaginal birth) or vertical uterine incision extension (caesarean section) may be used, with or without tocolysis. D

Evidence concerning the management of preterm labour with a breech presentation is lacking. Routine amniotomy should be avoided. A specific problem encountered during preterm breech delivery is delivery of the trunk through an incompletely dilated cervix; this occurs in up to 14% of vaginal deliveries.[63] In this situation, lateral cervical incisions have been used to release the after-coming head. The RCOG StratOG programme recommends incisions at 2, 6 and 10 o'clock. Similar rates of head entrapment have been described for vaginal and abdominal delivery.[64] For head entrapment at caesarean delivery, it may be necessary to extend the uterine incision to a J shape or inverted T.

Evidence level 3

8. Management of the twin pregnancy with a breech presentation

8.1 *How should a first twin in breech presentation be delivered?*

Women should be informed that the evidence is limited, but that planned caesarean section for a twin pregnancy where the presenting twin is breech is recommended. C

Routine emergency caesarean section for a breech first twin in spontaneous labour, however, is not recommended. The mode of delivery should be individualised based on cervical dilatation, station of the presenting part, type of breech presentation, fetal wellbeing and availability of an operator skilled in vaginal breech delivery. C

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