

Recommendations of the FIGO Committee on Perinatal Health on guidelines for the management of breech delivery[☆]

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The FIGO Committee on Perinatal Health: Prof Künzel (Giessen), Prof. Bréart (Paris), Prof. Davidson (Los Angeles), Prof. Eskes (Nijmegen), Prof. Huch (Zürich), Prof. Odendaal (Tijgerberg), Prof. Patel (Dundee), Prof. Takeda (Tokyo) and Prof. Yu (Clayton), has discussed the management of the breech in gestation and during labor for the developed and developing countries on the background of perinatal and maternal morbidity and mortality. The recommendations are an expression of the opinion of the committee which have been presented to the Executive Board of FIGO for information on 12–13 November 1993 in Geneva. The recommendations do not reflect the official position of FIGO.

1. Introduction

The recommendations of the FIGO Committee on Perinatal Health for the management of single breech presentations are based on proposals of the German Society of Perinatal Medicine in 1984. The suggestions are aimed to guide obstetricians world-wide in decision making and in handling single breech presentations. The committee is aware of the fact that breech management in the developed countries may differ from that in the developing countries of the world, i.e. where maternal morbidity and mortality after cesarean section is high and where no intensive care is available. The recommendations may therefore be considered as guidelines.

2. Present situation of the management of breech presentation

2.1. The rate of cesarean sections in breech presentation

The rate of Caesarean sections has continued to rise during the past decade and is over 90% in some industrialized countries and varies considerably.

2.2. Maternal mortality and morbidity in cesarean sections

Maternal mortality as an example was about 1:1500 caesarean sections (0.596/1000) according to the data of the Hessische Perinatalerhebung (HEPE) (Perinatal survey in Hesse, Germany) in 1986–89. Depending on definition the literature shows a range of maternal morbidity of 20–40/1000.

2.3. Perinatal morbidity and mortality

2.3.1. Perinatal mortality

Perinatal mortality of breech infants is not only related to mode of delivery but also to several additional factors such as: prematurity, malformations, twin pregnancies, preterm premature rupture of membranes with amniotic infection syndrome, early placental abruption, lesions induced by the delivery including intracranial hemorrhage, cord prolapse in the active phase of delivery followed by hypoxia and acidemia. With decreasing gestational age perinatal mortality and morbidity rises. The incidence of perinatal mortality is an insufficient measure to assess the obstetrical management of breech presentations. At the present situation the perinatal death in developed countries is a rare event. Numerous publications suggest that the decrease in perinatal mortality in breech presentations is due to a higher rate of cesarean sections used in breech presentations. Others, however, find no correlation between the high rate of cesarean sections and a lower perinatal mortality rate. The relationship between mortality rate and the mode of delivery in preterm breech deliveries is controversial. There is some evidence from data which show that the perinatal mortality of very small premature babies can be reduced by cesarean section.

2.3.2. Perinatal morbidity

Early morbidity. There is a higher rate of early neonatal morbidity in the group of vaginally delivered preterm babies in all weight classes. Early morbidity is defined by a low Apgar score, acidosis at birth, the need of resuscitation and the frequency of child transfer to intensive care units.

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The morbidity rate seems to be dependent on the quality of the birth management and criteria for the admission to a trial of labour which allows vaginal delivery of breech presentations. Appropriate selection and expert management during breech delivery may be able to minimize the morbidity comparable with mature babies. Differences between morbidity rates of abdominally and vaginally delivered neonates may be more marked with immaturity.

Intracranial haemorrhage. Intracranial haemorrhage in mature babies as detected by ultrasound is a rare event. Depending on the gestational age the frequency of cerebral haemorrhage is higher in premature babies in both vertex and breech presentations than in mature term babies. Intracranial haemorrhage is more frequent after breech rather than vertex deliveries depending on the week of pregnancy.

Late morbidity. There are only a few well controlled studies. Most of these studies neither distinguish between preterm and term delivery nor between elective and emergency cesarean section. There is a suggestion that breech babies delivered by cesarean section have a reduced rate of disability. While cesarean section may be of benefit to term breech infants, premature babies may also show a better outcome.

2.4. Conclusion from the review of the literature

Well structured randomized and controlled prospective studies on the mode of delivery which can affect the morbidity and mortality of breech presentations of unselected patients are not available. According to The Iowa Premature Breech Trial controlled trials cannot anymore be accomplished in industrialized countries. The following points have to be stressed:

The studies did not distinguish between elective and emergency cesarean section.

The elevated maternal morbidity and mortality in the group of cesarean section is caused by biased negative selection.

Breech presentations per se may have higher perinatal morbidity and mortality rates regardless of the delivery mode.

In contrast to vaginal delivery the cesarean section seems to benefit the very small and very large babies.

Criteria for the management of vaginal and abdominal breech delivery needs to be defined.

3. Criteria for elective cesarean section and for trial of labor for vaginal breech delivery

The decision for vaginal delivery has to be evaluated as carefully as the decision for cesarean section. Primiparity usually is not an indication for caesarean section.

3.1. Pregnancy at term (37 weeks' gestation and more)

The following preconditions have to be met for vaginal delivery at term.

The size of the fetus should be assessed by the best available method: clinical examination, ultrasound, MRT. If used it is recommended to measure the skull diameter and the circumference and the diameter of the trunk.

All methods for the examination of the pelvis are difficult to interpret and therefore there is no consensus about superiority of radiological, MRT and clinical methods in literature. Therefore, the method with the most experience in the clinic should be chosen.

Cesarean section may be the method of choice in cases of an estimated birth weight above 3500–4000 g.

Hyperextension of the head and hydrocephalus should be ruled out by ultrasound.

If a protracted labor is likely, i.e. high position of the breech, immature cervix, insufficient descent of the breech in spite of adequate uterine contractions and cervical dilatation, cesarean section is indicated.

In cases of additional risks (i.e. diabetes, intrauterine growth retardation, pathological CTG, etc.) cesarean section should be considered.

In cases of total or incomplete footling breech cesarean section is recommended.

Severe malformations should be excluded prior to decision of delivery.

An obstetrician experienced in vaginal breech delivery should be present during delivery.

Electronic fetal monitoring (CTG) and microblood analysis should be available.

3.2. Preterm labour (36 weeks' gestation and below)

Between 28 and 34 weeks of gestation elective cesarean section is the most recommended way of delivery. It has to be pointed out though that this question is controversially discussed. The quality of neonatal care is important. A high percentage of cesarean section is only indicated if intensive neonatal care is available which guarantees the best chances for survival and development of the non-traumatized premature infant. Neonatal and late morbidity is very high in the very low preterm infant regardless of the mode of delivery.

4. External cephalic version

External cephalic version is a management worth of consideration to avoid breech delivery. The method does have some risks. Emergency cesarean sections may be necessary in 1–2% of all cases.

5. Selection of the hospital for breech delivery

For the delivery of a patient with breech presentation

it has to be considered that in a number of cases additional risks (especially prematurity) exist which demand for a special obstetrical management and neonatal care. For the selection of the hospital in which the vaginal or abdominal breech delivery is performed the following recommendations should be adhered to:

The premature fetus should be delivered in a hospital with a neonatal intensive care unit.

In all breech deliveries an experienced physician in handling vaginal breech delivery and primary resuscitation should be available.

Medical care and continuation of the treatment by a neonatologist in case of hypoxic newborn has to be provided.

Immediate readiness for anaesthesia and cesarean section have to be assured in cases of trial vaginal delivery.

If the necessary conditions for breech deliveries cannot be fulfilled the patient should be transferred to a sufficiently equipped obstetrical department.

6. Management of the breech delivery

An intravenous access has to be assured in order to ease the management of occurring complications.

Immediate readiness for anaesthesia is mandatory. Peridural anaesthesia is recommended for relaxation of the pelvic outlet in cases of assisted breech delivery. Furthermore, this kind of anaesthesia is useful also for emergency operations and should it be necessary, for avoiding disadvantages of emergency general anaesthesia.

If external CTG-monitoring is assured, amniotic membranes should remain intact. Internal CTG-monitoring is recommended if external heart rate monitoring is insufficient.

The breech should be kept back until the fetus may be delivered completely and possibly spontaneously during one uterine contraction

During the expulsion stage the administration of oxytocin is recommended.

Episiotomy in vaginal breech delivery is mandatory

Cesarean section should be generously indicated as soon as complications occur even during the late first or second stage of labor.

It has to be accepted that breech extraction has higher neonatal morbidity and mortality than cesarean section and is, for that reason, not recommended.

If in case of cesarean section the lower uterine segment is insufficiently dilated (small preterm infant) sufficient access has to be assured by vertical incision.

7. Education and training of the management of breech presentation

The high frequency of cesarean section in breech presentations in many countries makes the education and training of vaginal breech delivery to an unsolved

problem. Even larger hospitals are not excluded from this problem since the breech deliveries are divided up among a greater staff of obstetricians. It is therefore recommended to perform a regular phantom training to preserve the ability to manage breech presentations.

8. Recommendations for developing countries

As the facilities for cesarean section may not be readily available or as anaesthesia may be safe and operative morbidity high, more breech deliveries will have to be done vaginally. To make vaginal delivery as safe as possible, the following guidelines are given.

Promote antenatal care where breech presentations could be detected.

Encourage the use of external cephalic versions.

Instruct patients to go to the clinic or hospital soon after contractions have started.

Suppress preterm labor if possible.

Instruct all nursing personnel how to do a breech delivery as outlined.

Prevent bearing down before the cervix is fully dilated.

If there is poor progress in dilation of the cervix cesarean section is recommended.

9. Information of the patient

The patient has to be informed about all relevant facts and uncertainties before the breech delivery. She should be able to understand, accept, and support the medical advice for abdominal or vaginal delivery.

The obstetrician should consider the preferences of the informed parents. He should also consider how difficult it is for them to meet the right decision and should keep his role as a counselor to save them from self-approaches if it comes to an unfortunate end.

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