

The occasional breech

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This article has been peer reviewed.

Introduction

About 3% of pregnancies at term are breech presentations.[1] Some of the perinatal morbidity associated with a breech may be mitigated by planned cesarean section (C-section), at the cost of potential maternal surgical complications.[2] Pre-emptive C-section for breech presentations has become commonplace. However, even in city hospitals not all women make it to the operating room in time. Thus it is certain that rural doctors, some without local C-section capacity,[3] will continue to have to deliver babies who present by the buttocks or feet. It is hoped that this primer will be of assistance in such an occurrence.

[If you are in a hurry, skip to the parts highlighted in bold.]

Breech is associated with increased morbidity. Part of this relates to factors beyond direct control, such as prematurity and congenital abnormalities. Part relates to the challenge of delivering the largest part of the baby, its head.

Over the last 20 years, vaginal breech delivery in North America has all but vanished and has been replaced with the comfortable C-section. The practitioners who retained competency, with historic volume supplemented with a few highly selected perfect breeches (term, frank, multip, generous pelvis and a touch-small fetus), have been mostly convinced by either the lawyers or the Term Breech Trial[4] to deliver by a booked C-section. Although the results of the Term Breech Trial have not held in the 2-year follow-up[5] and there are still arguments for planned vaginal delivery,[6,7] more than 90% of hospitals in one survey delivered breech babies by elective C-section.[8]

So it is not without some trepidation that a rural doctor contemplates the discovery of breech presentation in labour. As labour progresses, the neonatal advantage of C-section is lost.[9] A rural doctor in such a situation has to contemplate vaginal delivery. Ultimately, what historically made a good breech to deliver, is rendered moot if the baby's sacrum is crowning.

Delivering a breech

The good news is that the vast majority of breech babies, and hopefully especially those in a hurry, will deliver themselves. Thus, after **calling for help**, the first step in vaginal breech delivery is to encourage the mother's efforts. Both the extra hands and a good rapport will reduce both the mother's and your anxiety and will help you when you do need to intervene.

As the breech crowns, consider a generous episiotomy. It won't help increase room in the pelvis but will make it easier for you to place your hands or forceps. **Do not apply traction on the baby because this may deflex and trap the head and cause injury** (Fig. 1).

When the umbilicus delivers you may pull out a length of cord to ensure slack and to monitor fetal pulse. **If the baby is facing up (sacrum posterior), rotate the baby gently by two hands on its pelvis so it assumes the more favourable face down position.** Allow the baby's leg's to deliver by "popping out."

At this point the baby can be either left to hang or supported at 45 degrees to the floor or on a horizontal angle. Do not elevate the body beyond the horizontal (Fig. 2). The baby's back can be

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rotated from one anterior oblique to the other, which is helpful in flexing the arms across the chest. The shoulders can be delivered with the trunk in the oblique. When the scapulae deliver, **the arms can be optionally swept across the chest and out of the birth canal** (Fig. 3, Fig. 4).

Delivery of the head should be by flexion, which presents the same favourable diameters to delivery as with a vertex presentation. A modified Mauriceau–Smellie–Veit (MSV) manoeuvre is used to flex the head. **To deliver the head, set yourself below the baby. One hand goes on the baby's back with a finger pushing down on the occiput. Place the other hand under the baby with the forearm supporting it and with two fingers pushing up on the maxillae. Your assistant will follow with transabdominal pressure flexing the occiput. Some traction on the shoulders by your upper hand may be required. As the head delivers keep the baby's body in neutral position in respect to the head by raising it gently in a large arc** (Fig. 5).

The vast majority of babies presenting in the breech position will be delivered by this method.

Complications: Piper forceps

Forceps delivery is to be respected, as the instrument will amplify leverage and traction, greatly increasing the chance of both delivery and injury. Routine forceps have been advocated for pre-term

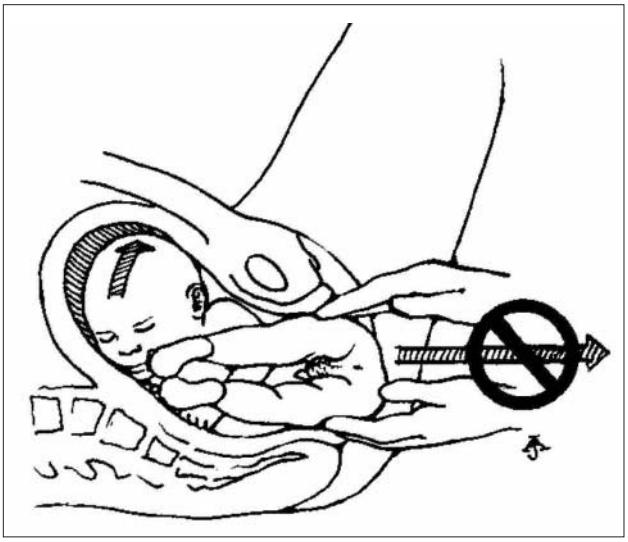


Fig. 1. Axial traction is to be avoided as it may cause the head to deflex and result in spinal injury. Keep the sacrum anterior.

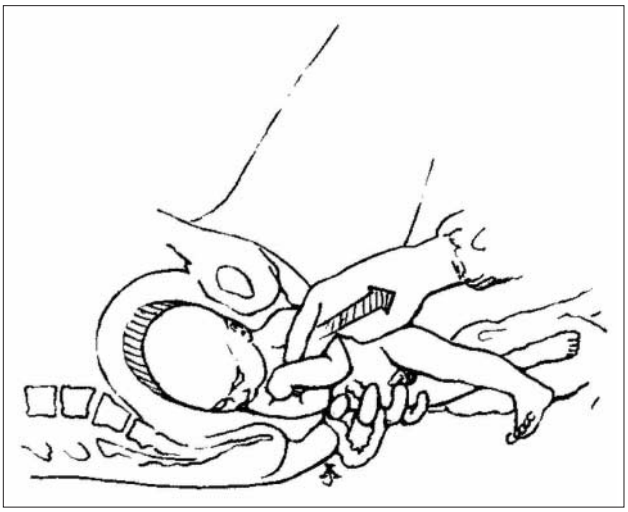


Fig. 3. When the scapulae deliver you can assist delivery of the arms by sweeping them across the chest and then extending the elbows.

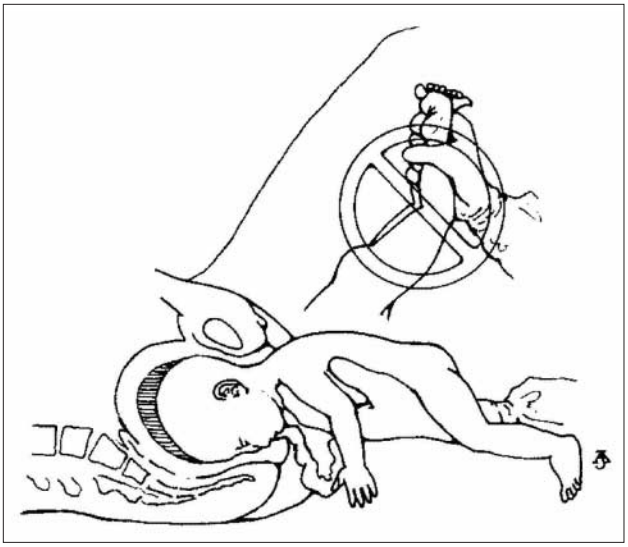


Fig. 2. The trunk is supported in the horizontal, with a small loop of cord pulled out. A towel can be used to support the trunk in the horizontal plane.

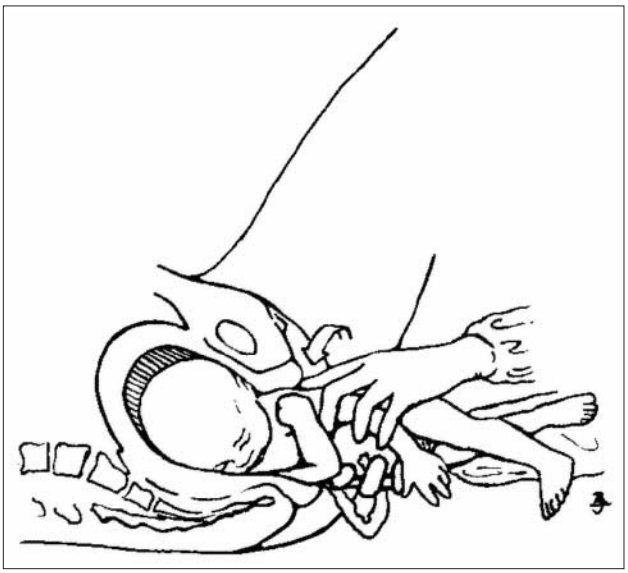


Fig. 4. Gentle rotation of the shoulder girdle facilitates delivery of the left arm.

breech but should be avoided by the inexperienced physician because vaginal breech delivery normally has a good outcome. Early recognition of abnormal breech presentation and attempted delivery is important. **Failure to manually deliver the head in 2 or 3 minutes is an emergency and warrants an attempt at forceps,** by an informed, even if inexperienced, operator.

An assistant holds the baby up to ease application. The operator starts by test assembling the forceps (Pipers are preferred, but any will do) and visualizing the application as if the presentation was occiput anterior. **The handle of the left blade is held by the operator's left hand and inserted almost horizontally into the mother's left side.** The operator's right hand may be used against the patient's left vaginal wall to direct the blade and reduce chances of injury from the insertion (Fig. 6). The blade may be left there or supported by the assistant while the right blade is applied.

The handle of the right blade is held by the operator's right hand and inserted in a manner similar to the first blade, between the mother's right side and the baby's head. The operator's left hand may be used against the patient's right vaginal wall to direct the blade and reduce chances of injury from the insertion.

The handles of the forceps should come together and lock easily without undue force. If not, they should be removed and reapplied. There is no other check on the application that is possible. When the operator is satisfied, **the baby is laid down on the handle of the forceps and traction is applied. At first, traction is applied downward and then, as the head descends, the forceps can be progressively lifted in an arc reflecting the pelvic curve** (Fig. 7).

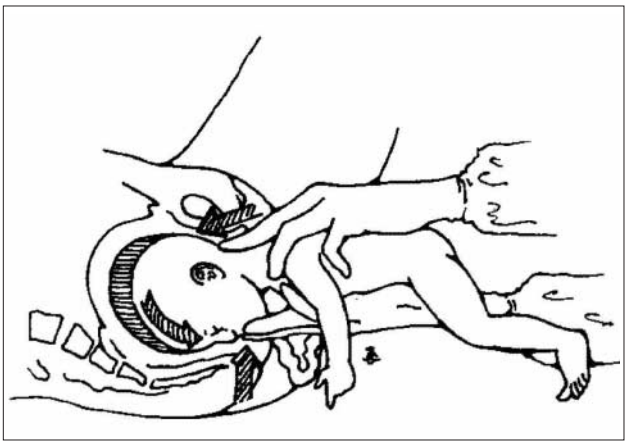


Fig. 5. Maintain cephalic flexion by pressure on the baby's maxilla (not mandible!). Delivery of the head is easily accomplished with continued expulsive forces from above and gentle downward traction. As the delivery proceeds, the baby's position moves from the horizontal to a more vertical one.

Complications: nuchal arm

One or more of the baby's arms may extend past the neck along with the head. With a generous pelvis or a small baby this may not even be noticed and the delivery effected regardless. However, an attempt to flex the arm across the baby's chest and out of the vagina should be made.

Complications: cervical entrapment

Particularly in premature or footling breeches, the body can deliver without dilating the cervix enough

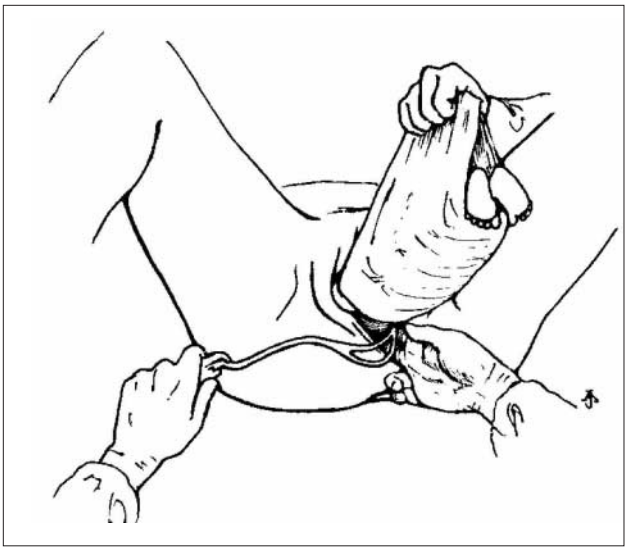


Fig. 6. The baby is held up by the assistant as Piper forceps are applied.

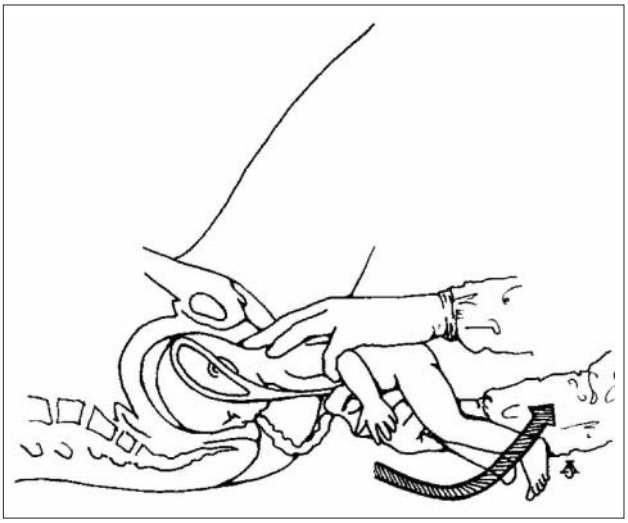


Fig. 7. Traction on the forceps is applied initially below the horizontal plane but rotates through the horizontal toward the vertical as the head delivers.

to allow passage of the after-coming head. At some risk to the mother, pairs of ring forceps can be placed at 2:00, 10:00 and 6:00 o'clock away from the cervical arteries. Radial (Dührssen's) incisions can be made, extending about 3 cm between each pair of forceps to release the head. Adequate exposure, anesthesia and hemostasis are significant problems, so this should be considered a method of last resort.

Conclusions

Most, if not all, breech deliveries should be done by elective C-section. A rural doctor, forced by circumstances to deliver a breech baby vaginally, can, in the vast majority of cases, deliver the baby without incident. Very rarely, emergency application of forceps will be required.

Competing interests: None declared.

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