Undiagnosed Breech: towards a woman-centred approach

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Abstract

The unexpected diagnosis of breech presentation upon admission in labour affects approximately 1:100 women and presents an ethical dilemma for health professionals involved, particularly when this occurs in the context of midwifery-led care. This article critically examines current guidelines recommending caesarean section on the basis of available evidence, outlines factors which must be considered in order to provide safe care, makes recommendations for women-centred counselling, and explores the role of the midwife in this situation.

Conflict of Interest

None known

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Background

The prevalence of breech presentation is approximately 3-4% at term (3-4 women in 100 at 37 weeks) (Hickock *et al* 1992 and Albrechtsen *et al* 1998). Currently, standard care involves antenatal screening to identify babies who are presenting breech after 36 weeks, with subsequent referral for ultrasound confirmation and counselling regarding treatment options. However, this screening process is not highly effective, commonly resulting in a 25-33% rate of breech presentation diagnosed for the first time in labour (Nwosu *et al*, 1993, Jackson and Tuffnell, 1994, Nassar *et al*, 2006). Thus, the experience of an unexpected diagnosis of breech presentation in labour affects approximately 1 in 100 women.

NICE Guidelines

The National Institute for Health and Care Excellence (NICE) clinical guideline on caesarean section (2011) recommends that 'pregnant women with a singleton breech presentation at term, for whom external cephalic version is contraindicated or has been unsuccessful, should be offered CS because it reduces perinatal mortality and neonatal morbidity' (NICE, 2011:10). This is based mostly on the primary report of the Term Breech Trial (Hannah et al, 2000) – a large, randomised controlled trial (RCT), which has

attracted much criticism, even among medical contributors to the trial (Glezerman 2006). The Term Breech Trial included women who were randomised in labour, but did not report outcomes according to the stage of labour in which this decision was made. NICE also recommends further research into the outcomes where breech presentation is diagnosed in the second stage of labour. It suggests that an appropriately powered RCT should include at least 4230 women, which would make it approximately twice the size of the Term Breech Trial.

One secondary analysis of the Term Breech Trial data did in fact compare outcomes for those babies actually born by caesarean section in active labour (defined as contractions 5 minutes or less apart and the cervix 3 cm or greater dilated or 80% effaced) or vaginally (Su et al, 2003). For these babies, even when the definition of 'active' was more conservative than current intrapartum guidelines, the difference in mortality/morbidity was not statistically significant [OR 0.57, 95% CI 0.32-1.02, *p* value .06], a finding to which Su et al (2003) make no reference. The Term Breech Trial team concluded, based multiple secondary analyses, that a planned pre-labour caesarean section was the preferred course of action for breech-presenting babies:

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> "... [F]rom a baby's perspective, a prelabour caesarean or a caesarean during early labour are better approaches to delivery if there is a singleton fetus in breech presentation at term. These findings are consistent with the findings of observational studies which have found better outcomes for the singleton fetus in breech presentation at term following elective caesarean, compared with emergency caesarean" (Su et al 2004:1073).

Thus, we have no conclusive evidence of the benefit of caesarean section performed in active labour (≥3 cm), without evidence of fetal compromise.

In line with other studies, including one from the UK (Confidential Enquiry into Stillbirths and Deaths in Infancy (CESDI), 2000), the Term Breech Trial found more adverse outcomes due to causes related to labour than to the delivery itself (Su et al, 2004). The two-year follow-up to the Term Breech Trial, which found no difference in long-term adverse outcomes between the planned caesarean section and planned vaginal birth groups, suggests an explanation (Whyte et al, 2004). Whyte et al (2004) were surprised to find that increased numbers of children with neurodevelopmental delay in the planned caesarean section group (14 adverse outcomes, of which 2 were deaths, sample of 457) balanced the increased numbers of deaths (13 adverse outcomes, of which 6 were deaths, sample of 463) in the planned vaginal birth group. This is likely

due to the fact that morphological and functional disorders associated with breech presentation often predate delivery (Albrechtsen et al, 2000), resulting in already compromised babies, less able to cope with the stresses of labour and birth. A policy of pre-labour caesarean section may prevent these babies from dying, but has not been shown to lessen the number of babies who at two years of age are severely delayed or have died. A caesarean section in active and progressive labour (≥3 cm) for a breech baby who is coping well is not supported by evidence of improvement in long-term outcomes.

Increased risks for mothers

Surprisingly, given the admitted lack of clarity about the benefits of a caesarean section for an uncomplicated breech presentation in active labour, the authors of the NICE *Caesarean Section* guideline (2011) avoid discussing the known increased risks of emergency caesarean section, especially in advanced labour, for women in the context of breech presentation (2011). Later in their guideline, they state that compared with women who had a vaginal birth, a higher proportion of women who had “emergency” CS (OR 6.3, 95% CI 2.0 to 20.2) and those who had assisted vaginal birth (OR 4.8, 95% CI 1.5 to 15.2) had post-traumatic stress disorder (PTSD) at 1–2 years after birth, although curiously still recommend that practitioners are to

reassure women who have had a CS that they are not at increased risk of PTSD. This risks minimalising what many women will experience as a traumatic change of plans (Ryding et al, 1998), which may also adversely affect their partners (Schytt and Hildingsson 2011).

Although the Term Breech Trial found no difference between mortality and morbidity between women planning a vaginal birth and a caesarean section, again secondary analysis did find a significant difference in maternal outcomes dependent on actual mode of delivery (Su et al, 2007). Su's team concluded that a CS during active labour (≥3 cm) carried a three times greater risk of maternal morbidity than a vaginal birth [OR 3.33, 95% CI 1.75-6.33, *p*-value <0.001], consistent with other studies (Waterstone et al, 2001). There was also an increase in maternal morbidity associated with CS performed in early labour, although less significant [OR 2.41, 95% CI 1.07-5.46, *p*-value 0.03]. This difference in adverse outcomes for women when caesarean sections are performed before labour, versus during early and late labour, is clearly reflected in the Royal College of Obstetricians and Gynaecologists (RCOG) guidelines on consent for caesarean section (2009).

Without knowing which of the Term Breech Trial caesarean sections in active labour (≥3) were 'planned' CS deliveries and which were compromised 'planned' vaginal deliveries, we cannot say for certain whether a caesarean

delivery significantly improves neonatal outcomes once women are in active labour, nor whether any noticeable improvement is more than we would expect to see for a vertex-presenting baby born electively by caesarean section rather than vaginally. However, we can be certain that the outcomes for women are three times worse after an emergency caesarean section than a vaginal birth, and a caesarean section greatly increases risks for future pregnancies (Verhoeven et al, 2005). Therefore, counselling a woman with a breech presenting baby at any stage in labour needs to be significantly different than counselling a woman about her options antenatally, as she no longer has the option of a comparatively safe pre-labour caesarean section (Lawson 2012).

Undiagnosed breech research

The debate is amplified by studies which have looked at outcomes for undiagnosed breech presenting babies in particular. Several single-site observational studies have observed no difference in outcomes between diagnosed and undiagnosed breech babies, aside from a higher rate of vaginal breech birth (VBB) where breech presentation was undiagnosed, highlighting the clinical uncertainty surrounding the ultimate value of antenatal detection (Nwosu et al, 1993; Leung et al, 1999; Bricker et al, 2008).

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Nwosu et al's 1993 study of 301 breech deliveries (101 elective caesarean sections, 122 planned VBB, 78 diagnosed in labour) at a large hospital in Liverpool found no difference in short term morbidity. The only statistical difference they did find between the groups was an increased rate of vaginal delivery among those diagnosed for the first time in labour. These findings found agreement with similar data from Bradford, presented in a follow-up letter, concerning 165 breech presentations in one year (Jackson and Tuffnell 1994). About one third were undiagnosed until labour, and of these 55% delivered vaginally compared with only 15% of those diagnosed antenatally.

Studies undertaken outside of the UK have produced similar results (Babay et al, 2000; Bako et al, 2000; Leung et al, 1999; Usta et al, 2003, Zahoor et al, 2008). Usta et al (2003) matched 256 Lebanese women whose breech babies were diagnosed prior to the onset of labour with 256 women whose breech babies were undiagnosed. They concluded that antenatal diagnosis of breech presentation decreases the threshold for caesarean delivery (64.1% vs. 50.8%, $p = 0.003$), and failure to diagnose breech antenatally does not affect neonatal outcome. Zahoor et al (2008) reported a remarkable 80% rate of undiagnosed breech among 203 cases in one unit in Pakistan in 2001, again noting no increase in adverse neonatal outcome, despite a significant increase in vaginal delivery rate (84.1% vs 55%) among those who were

undiagnosed, a difference which remained even if the figures for successful vaginal delivery following external cephalic version (ECV) were included (25%). Similarly, in a retrospective analysis of 131 women attending a private obstetric clinic in Hong Kong, Leung et al (1999) found an increased rate of vaginal birth (46%) in the group of women whose babies were undiagnosed, compared to those who were diagnosed antenatally (11%), even where successful ECV's were included (26%). Again, neonatal outcomes did not differ between the groups.

Some population-based studies have noted a disproportionately higher incidence of perinatal mortality for babies who were undiagnosed prior to labour, when reporting on adverse outcomes following vaginal breech births (Krebs and Landhoff-Roos, 1999; CESDI 2000). However, these studies do not compare data for undiagnosed breech babies who were delivered by caesarean section, which is important, as these babies have been observed to be at higher risk regardless of mode of delivery (Cockburn et al, 1994).

The association of undiagnosed breech with poor outcomes may be due to lack of antenatal care for some women, which may contribute to missed diagnosis (Krebs and Landhoff-Roos, 1999; Babay et al, 2000; Usta et al, 2003). Results were similarly poor where studies included results for breech babies born outside of hospital settings (Krebs & Landhoff-Roos, 1999; Bako

et al, 2000; CESDI 2000). CESDI also reported several cases where women were admitted in early labour, but diagnosis occurred much later, after interventions known to increase risk (such as augmentation of a dysfunctional labour) had already been applied.

The numbers included in these studies are not large enough individually to draw conclusions about rare outcomes such as neonatal death and serious morbidity, and the assessment and management skills that produced these outcomes have arguably been in decline since some of the first studies were published. However, the data do suggest that diagnosis of breech presentation for the first time in labour should not in itself be considered a contraindication for a vaginal birth (RCOG, 2006). In addition to women who have received little or no antenatal care, the other category of women most likely to avoid diagnosis of breech presentation are those women otherwise at very low obstetric risk who have not been subject to increased antenatal monitoring, and therefore most likely to have a straightforward vaginal birth regardless of presentation.

Since the publication of the Term Breech Trial, breech research has focused on external cephalic version (ECV) and the role of appropriate selection criteria in ensuring good clinical outcomes (Verhoeven et al, 2005; Goffinet et al, 2006; Vendittelli et al, 2006). The RCOG breech management guidelines

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note: “Although much emphasis is placed on adequate case selection prior to labour, assessment of the previously undiagnosed breech in labour by experienced medical staff can also allow safe vaginal delivery” (2006:5), referencing Nwosu (1993). Indeed, this lack of clarity on exactly how much difference antenatal diagnosis makes to outcomes is the reason universal third trimester ultrasounds to increase detection rates have not been recommended (Bricker et al, 2008)

Women-centred counselling

Women will be looking to their providers to assist them in making a wise decision. Problems arise in the intrapartum counselling process not when women are offered a caesarean section according to national and local guidelines, but when that ‘offer’ is given as ‘advice,’ or appears to be her only viable option.

Practitioners must keep in mind that to offer a caesarean section during active labour suggests to a woman that something is ‘wrong’ with her baby, and that she should now reconsider her decision to birth vaginally. While we must explain why we are offering a caesarean section, we must also be unbiased about putting the situation into perspective, using all of the information available to us, including the significantly increased risks for a

mother receiving a caesarean section in active labour, and the lack of conclusive evidence that a caesarean section will improve the outcome for her baby once in active labour. She should be given the benefits of a vaginal birth for herself and her baby, as well as the risks (General Medical Council (GMC), 2008), both immediate and long-term (Whyte et al, 2004), including for future pregnancies (Verhoeven et al, 2005). Mothers should also be informed that the results of the Term Breech Trial do not apply to spontaneous, steadily progressing labours where the management is expected to be 'materially different' from that in the trial (Fahy, 2011; Hofmeyr et al, 2011; Evans, 2012). Exactly what 'materially different' means is a matter for debate, but certainly includes births where women birth in upright positions, which were not represented in the Term Breech Trial.

Consent for a caesarean section cannot be gained until a woman knows what the alternatives are, including the support she will receive to birth her baby vaginally if that is what she prefers. If a plan for support is not available, or staff are not willing and confident, a vaginal birth is not a viable option, and the woman may feel coerced into having a caesarean section or entering into a conflicted relationship with her providers, which puts everyone at risk. Wide variation has been observed in rates of vaginal breech births, whether breech presentation was diagnosed antenatally or in labour, unrelated to objective selection criteria (Nwosu et al, 1993; Jackson and Tuffnell, 1994; Goffinet et

al, 2006). Some have attributed this to a wide variation in consultant preferences and attitudes (Nwosu et al, 1993; Jackson and Tuffnell, 1994; Dhingra and Raffi, 2010).

The role of the midwife

With inconsistency from obstetric colleagues, to whom midwives will refer management once a breech presentation is discovered, how should midwives uphold their professional obligations to be a woman's advocate? In a Royal College of Midwives (RCM) *Student Life* e-newsletter, student midwife Naomi Carlisle describes witnessing an undiagnosed breech birth (2012). In her account, the woman, having expressed her preference for a vaginal birth, is advised according to the attending obstetrician's preferences, including a precautionary epidural and intervention where it was not necessary, while the attending midwife advocated (described as 'battling') for evidence-based practice and truly informed consent: 'It was interesting hearing the doctor explaining all the positives of a CS and all the negatives of a vaginal breech delivery.' Carlisle reflects on how the woman must have found it 'extremely confusing to receive conflicting advice,' but a good outcome - a vaginal delivery in theatre - resulted. The woman was pleased and Carlisle 'left the shift feeling elated.'

Many midwives will recognise this situation as common. The midwife who felt confident to advocate for the woman to such an extent may be less common, though surely she herself was empowered by the woman's equally uncommon clarity about her wish for a vaginal birth. One wonders about the outcome of the inevitable case review process, and whether the midwife's efforts were acknowledged (positively or negatively).

Following the example of other midwives writing about breech (Cronk, 1998; Fahy, 2011; and Evans, 2012), midwife Penny Cole situates such spontaneous, term births in the 'continuum of normality,' in her recent reflective piece following attendance at an unexpected breech birth (Cole, 2012). However, the common practice of transferring care to obstetric colleagues following a diagnosis of breech presentation, coupled with the minimal breech experience of most midwives, may put midwives who do support women to attempt a natural birth, especially in an unplanned situation, in a precarious situation. Indeed, we have the strange conflict between the RCM's Campaign for Normal Birth (2005), which advocates encouraging women to birth in an upright position, and concerns voiced by authors such as Scamell (2010) that facilitating an all-fours birth may put the midwife at professional and legal risk.

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Where are women's voices in this debate? Reflecting on her breech home birth, midwife Anna Berkley writes:

> "The birth of my son (who was an undiagnosed breech) would have been a very different experience in hospital, probably traumatic, for all of the family .... I would have ended up lying on my back ... my legs in the lithotomy position with an epidural ... - and him delivered by forceps or, more commonly, a ceasarean section and a hospital stay of at least three days. Of course, I could have opted out of these protocols, but this is quite a difficult thing to do while in labour. It is human nature to want to please our caregivers, and I would have hated to be seen as 'difficult' or 'demanding'" (2006:17).

This suggests that the choices which (at least some) women want are not available in most hospitals. If obstetric colleagues are not comfortable providing support for a physiological breech birth, how should midwives respond, individually and collectively?

Although the modern management of breech is dominated by obstetrics, midwives participate in the construction of definitions of normality, in reference to physiological birth (Walsh 2007), and how this is monitored and measured. Midwives also define when it is appropriate, and for whom, to

extend a midwifery sphere of practice (Hartley 1997). Given the continued debate about whether breech presentation is an abnormality or an unusual normal (Cronk, 1998; Scamell, 2010), it may be useful to define a collaborative category, *normal for breech*.

Perhaps it is also time for professional organisation to clarify an appropriate midwifery approach to care for women with breech-presenting babies, one which acknowledges the need for close collaboration with obstetric colleagues but also recognises the expertise of midwives in facilitating normality, even in obstetrically complex situations. A midwifery guideline for breech birth would include a definition of what constitutes 'normal' for breech presentations, appropriate woman-centred counselling, and how midwives who wish to can achieve competency to include the collaborative management of normal breech births in their sphere of practice.

Looking forward: research into women's experiences and preferences

As a diagnosis of breech presentation for the first time in labour affects approximately 1:100 women, maternity services should have a coherent, evidence-based strategy for continuing to provide all options of care. In order to offer truly woman-centred care, midwives need to know what information women need antenatally in order to make a plan in case this situation arises,

and how to discuss the possibility. We also need to understand more about the choices women want (or would want) when confronted with an unanticipated diagnosis of breech presentation in labour, and how to deliver appropriate information in a way women experience as mostly supportive and enabling, rather than conflicted or coercive. Finally, we need to continue to explore as collaborating professionals how we can deliver a consistent, woman-centred service when management preferences among lead professionals are inconsistent.

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