Planned Caesarian Section Preferable in Breech Deliveries

Hannah ME, Hannah WJ, Hewson SA, et al. Planned caesarean section versus planned vaginal birth for breech presentation at term: a randomised multicentre trial. Term Breech Trial Collaborative Group. Lancet 2000;356:1375–83.

Study Overview

Objective. To determine whether planned caesarean section or planned vaginal delivery provides better neonatal and maternal outcomes when the fetus presents as a frank or complete breech at term.

Design. International, multicenter, randomized trial. Analysis was by intention to treat, with subgroup and sensitivity analyses planned a priori.

Setting and participants. 121 centers in 26 countries randomized 2088 women carrying a singleton pregnancy presenting as a frank or complete breech at term (at or after 37 weeks). Half of the participating countries had a low perinatal mortality rate (PMR) (< 20 per 1000 live births, as reported to the World Health Organization in 1996). Women were excluded if any of the following were present: evidence of fetopelvic disproportion, judgment by the clinician that the fetus was large or that fetal weight was estimated at 4000 g or more, hyperextension of the fetal head, judgment by the clinician that a fetal anomaly or condition existed that might create a mechanical problem during delivery, or a contraindication to vaginal delivery. Women whose pregnancy involved a known lethal congenital anomaly were also excluded.

Intervention. Women were randomly assigned to undergo either a planned caesarean section or a planned vaginal delivery.

Main outcome measures. The primary outcome was perinatal or neonatal mortality at less than 28 days of age (excluding lethal congenital anomalies) or serious neonatal morbidity. The secondary outcome was maternal mortality or serious morbidity in the first 6 weeks postpartum. Infants and mothers who died were excluded from analyses of serious morbidity.

Main results. Only 5 mothers and children were lost to follow-up. Two thirds of the women subjects were younger than 30 years (mean age not provided in article); slightly more than half were primigravidas. About 60% of the fetuses presented in frank breech position, and about 6% presented at or after 41 weeks. 90.4% of women in the planned caesarean group delivered by caesarean section, as did 43.3% of women in the planned vaginal delivery group. Five infants had lethal congenital anomalies, and 16 other infants died (3 in the planned caesarean group; relative risk [RR], 0.23 [95% confidence interval (CI), 0.07 to 0.81]). Similarly, 53 infants suffered serious morbidity, with the burden carried by the planned vaginal delivery group (RR, 0.36 [95% CI, 0.19 to 0.65]). One woman died and 74 suffered serious morbidity, with no significant difference between study groups. Subgroup analyses and sensitivity analyses that changed the definition of several variables (such as "experienced clinician present") did not substantially alter results except in 1 case. Countries with a low PMR had a much greater risk reduction with planned caesarean section than did countries with a high PMR (RR for countries with a high PMR, 0.66 [95% CI, 0.35 to 1.24])

Conclusion

In countries with a low PMR, planned caesarean section is clearly the method of choice for delivering fetuses in breech presentation at term. It is unclear whether there is a distinct advantage in countries with a high PMR.

Commentary

This was an excellent study designed to—successfully—resolve the issue of whether vaginal delivery is as safe as caesarean section for breech deliveries. An editorial published in the same issue of *The Lancet* concluded that planned vaginal deliveries should not be routinely performed for breech deliveries in countries with a PMR of less than 15 per 1000 births [1]. The editorialist also noted that the number needed to treat (which was not determined in the traditional manner and gave a more accurate estimate of benefit) was as low as 7 for countries with a low PMR [1].

Applications for Clinical Practice

As it is the mother who ultimately chooses the method of delivering her infant, all pregnant women should be informed of the results of this study. As clinicians perform fewer vaginal breech deliveries, no doubt the risk of such deliveries will go

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up. In this study, most clinicians who performed vaginal deliveries were considered "experienced" (almost a quarter had more than 20 years of vaginal breech delivery experience, and almost 60% had more than 10 years). In less experienced hands, the risks of this procedure will likely be greater.

References

1. Lumley J. Any room left for disagreement about assisting breech births at term? Lancet 2000;356:1368–9.

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