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Do Breech Presentations in Twins and Singletons Run Different Risks?

P. Buekens¹, R. Lagasse¹, F. Puissant², F. Leroy²

¹Laboratory of Epidemiology and Social Medicine, and ²Department of Obstetrics and Gynecology, St Pierre Hospital, Free University, Brussels

Abstract. We have compared breech twins and breech single births in a population recorded between 1974 and 1978 in 10 Belgian maternity centers. In 190 twin pregnancies, 38 first and 65 second twins were delivered in breech presentation. These twins were compared to 853 singleton breeches, of which 95 delivered by cesarean section were excluded. Data were stratified according to birthweight. No significant difference between twins and singletons was found in terms of perinatal mortality rates. However, Apgar scores below 7 at 5 minutes were significantly less numerous among first twins than among singletons. Therefore, first twins in breech presentation might be at lower risk of fetal distress. This difference should be taken into account in the management of first twins presenting by the breech.

Key words: Breech presentation, Twin pregnancy, Perinatal mortality, Apgar Score

INTRODUCTION

A renewed interest in breech presentation has risen in recent years. As a consequence, many obstetrical centers, in Europe as well as in the USA, have adopted more drastic rules in managing this condition. Some authors have even reached the conclusion that all breech deliveries should occur through cesarean section [13].

In twin pregnancies, breech presentation is a frequent event, affecting about 20% and 30% of first and second twins, respectively [14]. On the other hand, it has been proposed that twin pregnancies should be terminated around the 38th week of gestation, since they are burdened with a high rate of late intrauterine death [8, 9, 18].

Implementation of these principles has resulted into an increasing rate of cesarean section among twin pregnancies, especially when one of the babies is a breech [1, 7]. However, the rationale of extending to twins the policy adopted for breech singletons

remains to be validated. Therefore, the present work aims at defining if breech presentations in twins and in singletons carry similar or different risks.

MATERIAL AND METHODS

Between 1974 and 1978, 22,829 deliveries from 10 Belgian maternity centers using a common perinatal chart, were recorded. During this period, obstetrical attitudes towards breech presentation and twin pregnancy did not significantly vary in our country and did not entail an increased rate of cesarean sections among these categories. Breech singletons and twins were selected among this material. After exclusion of cesarean deliveries, intrapartur and early neonatal mortality as well as Apgar scores were compared between twins and singletons. Figures were broken down according to birth position of twins and to birth weight.

Statistical analysis of unstratified data were performed by Pearson's chi-square test. Analysis of stratified data was carried out in two steps: 1) application within the strata of Pearson's chi-square test or Fisher's exact probability test when necessary; 2) utilisation of Mantel-Haenszel's summary chi-square test when the direction of effect was not different among the strata.

RESULTS

We found 190 twin deliveries among 22,829 pregnancies, ie, a frequency of 0.8%. Thirty-eight first twins and 64 second twins were delivered in breech presentation. One first twin born by cesarean section was excluded. Other breech twins were compared to 853 singletons breech presentations of which 95 had been delivered abdominally and were excluded from our study.

Parity of singleton mothers, although lower, was not found significantly different from that of mothers of twins. Total intrapartur and early neonatal mortality amounted to 6.2% (47/744) in singletons vs 13.9% (5/36) among first twins and 16.4% (10/61) among second twins. Tables 1 and 2 show our data stratified according to birthweight. No significant difference of mortality between breech twins and singletons was found. The frequencies of Apgar scores below 7 at one minute were likewise not significantly different in singletons and twins (Tables 3 and 4). Also frequencies of Apgar scores below 7 at five minutes of second twins did not significantly differ from those of singletons (Table 6). However, this latter parameter turned out to be significantly better in first twins than in singletons (Table 5).

Table 1 - Breech Intrapartur and Early Neonatal Mortality in First Twins (T₁) and Singletons (S)

Birth weight	Death	T ₁	S	P
≤ 1500 g	+	4 (44.4%)	21 (38.9%)	ns
	-	5	33	
> 1500 g	+	1 (3.8%)	25 (3.6%)	ns
	-	26	665	

Mantel-Haenszel $\chi^2 = 0.07$ (ns)

Table 2 - Breech Intrapartal and Early Neonatal Mortality in Second Twins (T₂) and Singletons (S)

Birth weight	Death	T ₂	S	P
≤ 1500 g	+	9 (50.0%)	21 (38.9%)	ns
	-	9	33	
> 1500 g	+	1 (2.3%)	25 (3.6%)	ns
	-	42	665	

Table 3 - Apgar Scores Below 7 at 1 Minute in First Twins (T₁) and Singletons (S) in Breech Presentation

Birth weight	Apgar	T ₁	S	P
≤ 1500 g	< 7	5 (62.5%)	40 (83.3%)	ns
	≥ 7	3	8	
> 1500 g	< 7	5 (18.5%)	217 (31.9%)	ns
	≥ 7	22	463	

Mantel-Haenszel $\chi^2 = 3.6$ (ns)

Table 4 - Apgar Scores Below 7 at 1 Minute in Second Twins (T₂) and Singletons (S) in Breech Presentation

Birth weight	Apgar	T ₂	S	P
≤ 1500 g	< 7	11 (61.1%)	40 (83.3%)	ns
	≥ 7	7	8	
> 1500 g	< 7	18 (19.1%)	217 (31.9%)	ns
	≥ 7	28	463	

Table 5 - Apgar Scores Below 7 at 5 Minutes in First Twins (T₁) and Singletons (S) in Breech Presentation

Birth weight	Apgar	T ₁	S	P
≤ 1500 g	< 7	1 (11.1%)	28 (57.1%)	0.013
	≥ 7	8	21	
> 1500 g	< 7	1 (3.8%)	72 (10.5%)	ns
	≥ 7	25	613	

Mantel-Haenszel $\chi^2 = 6.29$ (P < 0.05)

Table 6 - Apgar Scores Below 7 at 5 Minutes in Second Twins (T₂) and Singletons (S) in Breech Presentation

Birth weight	Apgar	T ₂	S	P
≤ 1500 g	<7	7 (41.2%)	28 (57.1%)	ns
	≥7	10	21	
> 1500 g	<7	3 (7.0%)	72 (10.5%)	ns
	≥7	40	613	

Mantel-Haenszel $\chi^2 = 1.71$ (ns)

DISCUSSION

In view of its association with high perinatal mortality, breech presentation is rightly considered a major obstetrical concern. It is well established that in addition to various pathological factors not related to labour, breech cases are burdened with a high frequency of hypoxic complications and traumatic lesions occurring at birth [13].

Therefore it is not surprising that breech presentation has largely contributed to the general increase of cesarean sections during the last decade [17]. However, the choice between vaginal and abdominal delivery in breech cases remains a controverted issue [3]. While a consensus seem to have emerged in favour of cesarean delivery when confronted with a large fetus, a complete breech or hyperextension of the head [17], there is no agreement as to how the majority of breeches should be managed. Some authors would perform a routine cesarean section in almost all breech presentations [13], while others would only advocate this policy for the premature fetus. Even so, it is not clear whether the boundary should be placed at 1,500 or at 2,500 g of estimated body weight [4, 6, 10, 11, 15].

Under such conditions, it is obviously difficult to decide what should be done about twins in breech presentation. Systematic abdominal delivery has been proposed for all twin pregnancies in which both fetuses are not presenting as a vertex [1]. However, a widespread attitude nowadays is to perform a cesarean section when the first twin is a breech while disregarding second breech twins in this respect [7, 8, 9, 12]. But the belief that delivery of the first twin guarantees a fully dilated cervix and safe outcome for the breech-presenting second twin is not substantiated by facts [12]. No meaningful difference between mortality rates of first and second twins was observed in our study. Low Apgar scores at 5 minutes were even more frequent among second breech twins ($P=0.08$).

Our data indicate that breech first twins might be at lower risk of fetal distress than breech singletons (Tables 3 and 5). Such a difference could be related to different etiologies of breech presentations among twins and singletons. In twins, a breech is most often of purely mechanical origin, whereas in singletons, associated pathological factors may by themselves jeopardize the fetus [5]. It should also be stressed that since most twins are growth-retarded [16], their visceral maturity – namely, pulmonary – is more advanced than that of singletons of equivalent body weight. Therefore, low birth weight twins would be more resistant and exhibit better Apgar scores as evidenced in our study. Finally, although not significantly different, higher parity of mothers of twins might have played a favourable role.

Therefore, cesarean section for breech presentation should be contemplated at least not more frequently for first twins than for singletons. The recent suggestion that at birth weight above 1,500 g, routine cesarean section for vertex-breech twin gestation may not be necessary [2], would apply even more to first twin breech presentation. Admitting that not all breech cases should undergo cesarean delivery, our data support the adoption of a selective policy for the management of breech first twins.

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Correspondence: Dr. P. Buekens, Ecole de Santé Publique, Université Libre de Bruxelles, Route de Lennik, 1070 Brussels, Belgium.