

Letters to the Editor

Breech delivery and cryptorchidism

SIR—In their case control study of cryptorchidism (*J Epidemiol Comm Health* 1983 **37** 238–44) Swerdlow and coworkers report that their most striking finding is the high risk of cryptorchidism associated with delivery in the breech position. They suggest that the association is a direct one which presumably results from trauma to the testes during labour and delivery. Such an observation, if confirmed, might lead to a recommendation for caesarean delivery of all male infants in breech position because of the risk of testicular neoplasia that is associated with cryptorchidism. However, it seems prudent first to exclude other possible explanations for a relation between breech deliveries and cryptorchidism.

The authors note that breech delivery is associated with a number of abnormalities. The well known relation between breech delivery and prematurity leads to associations with early delivery^{1,2} and low birth weight.¹⁻³ These latter factors may well be risk factors for cryptorchidism, probably because of shortened gestation since the testes do not descend into the scrotum until the eighth month. Thus it seems necessary at least to adjust for the effects of shortened gestation and low birth weight before attributing the increase in cryptorchidism to breech delivery per se.

In a population based case control study just completed we also found an increased relative risk of cryptorchidism associated with breech delivery (RR = 3.1 and 1.3 against two different control groups, one loosely matched and one closely matched). However, these estimates were substantially reduced by the simultaneous adjustment for birth weight. It would be of great interest to know the influence of an adjustment for birth weight and/or gestational age on the estimated relative risk of cryptorchidism

associated with breech delivery derived by Swerdlow and coworkers.

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References

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- ²Collea JV, Quilligan EJ. The management of breech presentation. *J Reprod Med* 1979; **23**: 258–64.
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The authors reply as follows:

We found only weak relations between cryptorchidism and birthweight or gestation (see table 3 of the paper) whereas the relative risk associated with breech labour was apparently high, though based on small numbers (relative risk = 4.5 (9/2) for those going into labour in the breech position). As the number of subjects undergoing breech labour was small, however, it is clearly not possible for us to exclude completely the explanation put forward by Beard *et al.* For interest, we have recomputed the relative risk associated with experience of breech labour after adjusting for the effects of birthweight and gestation (using the method of logistic regression for matched pairs with the grouping of birthweight and gestation as given in table 3 of our paper). In order to do this it was necessary to exclude from the analysis matched pairs in which the birthweight and/or gestation were unknown for either member of the pair. This led to

Relative risks associated with breech labour after adjustment for birthweight and for gestational age

Factors adjusted for in the analysis	Analysis of patients with known birthweight		Analysis of patients with known birthweight and gestation	
	RR*	$\chi^2_{1†}$	RR*	$\chi^2_{1†}$
None	9.00	7.36	7.00	5.06
Birthweight	9.29	6.75	5.92	3.69
Gestation			5.50	3.38
Birthweight and gestation			5.64	3.26
No. of case control pairs in analysis		141		113

*Relative risk associated with the breech labour after adjustment for the factors specified

†Likelihood ratio test for the effect of breech labour after adjustment for the factors specified