Cerebral palsy and intrapartum care

Wrong denominator used

EDITOR,—Geraldine Gaffney and colleagues calculated a significantly increased odds ratio for cerebral palsy and for perinatal death according to two definitions of suboptimal intrapartum care.¹ Care was defined as suboptimal if there was failure to respond in specified ways to one of a large number of suboptimal conditions or if instrumental delivery met one of two descriptions. Therefore care was only at risk of being classified as suboptimal in the presence of one (or more) of those suboptimal conditions. In order to conclude that suboptimal care was or was not associated with an outcome, the proportion of cases and controls receiving suboptimal care who were at risk of suboptimal care must be compared.

Gaffney and colleagues did not say the number of cases and controls experiencing the conditions that put them at risk of being classified as receiving suboptimal care. However, they gave sufficient information—for example, the frequency of low Apgar scores at five minutes, ominous cardiotocograms, and meconium staining of amniotic fluid—for readers to infer that (as anticipated) cases were more likely than controls to be classified as having fetal distress or poor neonatal condition. These were the two conditions that must be present for a subject to be at risk of receiving the types of suboptimal intrapartum care associated with high odds ratios of cerebral palsy or perinatal death. The odds ratios for cerebral palsy and perinatal death shown in table V are therefore too high.

A similar error was made by Richmond *et al*² but the numbers of cases and controls at risk of being classified as receiving suboptimal care were provided, allowing an alternative analysis to be performed. Richmond *et al* found a significant association between cerebral palsy and suboptimal intrapartum care, the mean estimate of attributable proportion being 9.2% of cases at term. Analysis using only those at risk as the denominator suggested that the association was not significant and that the attributable proportion was only 2.1% of cases at term. The matched experimental design and lack of relevant information preclude a similar analysis of the study by Gaffney and colleagues.

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1 Gaffney G, Sellers S, Flavell V, Squier M, Johnson A. Case-control study of intrapartum care, cerebral palsy, and perinatal death. *BMJ* 1994;308:743-50. (19 March.)

2 Richmond S, Niswander K, Snodgrass CA, Wagstaff I. The obstetric management of fetal distress and its association with cerebral palsy. *Obstet Gynaecol* 1994;83:643-6.

Authors' reply

EDITOR,—Eve Blair's central point is the issue that we addressed in detail in our discussion—that is, mothers of children with cerebral palsy have a higher frequency of both adverse antenatal factors and signs of intrapartum distress than the mothers of children who do not have cerebral palsy. (These numbers and proportions are shown in table III of our paper.) As we stated clearly in the text, these are potential confounding variables. In other words, they could be associated both with the risk of suboptimal care (more complex clinical decisions would be needed in the cases than in the controls) and with the outcome of cerebral palsy (the adverse antenatal factors and the factors underlying the intrapartum fetal distress may have a causal role in cerebral palsy). Within the constraint of the matched design, we adjusted

for known confounding variables when this was possible; these are reported. Although our study was considerably larger than previous studies, its size and design (matched case-control) limited the analysis because too few matched pairs or triads could be included when some variables were adjusted for. We accept that had adjustment for the presence of intrapartum distress been possible, the odds ratio might have been reduced and confidence intervals widened. As we pointed out in previous correspondence,¹ there is clearly a need for larger collaborative studies to clarify this point.

In the meantime, we consider that the carefully worded, cautious discussion and conclusions of our paper hold. Suboptimal intrapartum care seems to be a rare cause of cerebral palsy; the origins of cerebral palsy in singleton babies born at term lies mainly in the antenatal period.

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1 Gaffney G, Johnson A. Cerebral palsy and neonatal encephalopathy. *BMJ* 1994;308:1507-8. (4 June.)

Teaching students in the community

EDITOR,—Mary Seabrook and colleagues highlight community health professionals' enthusiasm for teaching medical students.¹ But is enthusiasm enough? The authors point out that funds need to be found to support community based teaching.

Last year I looked into the teaching carried out by general practitioners in the South Western region attached to the department of general practice of Bristol Medical School. I asked the tutors what they did with students then and what they would be prepared to do in the future. Altogether 126 of 150 tutors responded. "Stimulation" was given as the commonest reason for teaching, but answers varied from "contact with youth" to "enjoying teaching," "sharing the pleasure of general practice," and "the odd pint of beer." Money was low on the list.

When asked to look ahead, in the light of the proposed increase in the amount and structure of teaching in the community, however, the tutors expressed many reservations. The question of payment became much more important. Many tutors had had students for years before the current fee came in with the 1990 contract. For them the fee was "a bonus and better than nothing." For some, the fee was "laughable, unrealistic, a pittance, abysmal, good value, for the university, a token." It was pointed out that although payment is for a minimum of five hours a day, teaching often continued for 10-12 hours a day. Generally, the response was that if more effort was required in the future then a higher payment would be required, especially in the present "financially oriented, more businesslike climate" of general practice. Private work would bring in more money than the "philanthropic teaching of medical students."

Many tutors said that money was not a prime consideration—some thought that it was their duty to teach—but money might well become important, particularly if the agreement of partners to continue teaching was required. Time was a big problem: "if willing horses were asked to do much more they could turn into obstinate camels." Several made the point that, in our society, education is always undervalued and underpaid.

As part of my research I contacted other departments of general practice throughout Britain. The conclusion generally was that, although some areas had not yet experienced a problem in recruiting general practice tutors, others were finding it

tricky and that to implement the proposed changes without an increase in funding would be difficult. This problem has been expressed elsewhere.² Unless a solution is found, the proposed increase in teaching in the community will probably be on an ad hoc basis, as at present, relying on enthusiasm that may peter out.

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1 Seabrook M, Evans T, Borton P. Teaching students in the community. *BMJ* 1994;309:612. (3 September.)

2 Fine B. *Widening the horizons of medical education*. London: King's Fund Centre, 1993.

Prescribing exercise in general practice

Pragmatic guidelines are needed

EDITOR,—As a general practitioner helping to develop a pilot project for a local exercise prescription programme, I believe that Steve Iliffe and colleagues' editorial omits a question of pressing urgency to the staff participating in our programme—namely, are there patients for whom an exercise programme carries unacceptable risks, and, if there are, how should such patients be identified and managed?¹

As Iliffe and colleagues imply, the patients who stand to gain most from exercise are probably those at highest risk of vascular disease. This group includes those who have established and diagnosed disease, while some patients with multiple risk factors will have undiagnosed disease. As a profession we are already encouraging unsupervised exercise in such patients, and it seems important to recruit them to our programmes; they will also include those most at risk of cardiovascular events during exercise.

Literature from the United States contains recommendations suitable for a different culture in terms of the availability of exercise testing and the attitudes regarding the management of ischaemic heart disease generally.² These seem inappropriate in north Tyneside; we urgently need some pragmatic guidelines applicable to the NHS. Ignoring the possible risks of exercise will prevent rational discussion and evaluation as soon or later someone will die or suffer a myocardial infarction during prescribed exercise.

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1 Iliffe S, Tai SS, Gould M, Thorogood M, Hillsdon M. Prescribing exercise in general practice. *BMJ* 1994;309:494-5. (20-27 August.)

2 Van Camp S, Cantwell JD, Fletcher GT, Smith K, Thompson PD. Exercise for patients with coronary artery disease. *Medicine and Science in Sports and Exercise* 1994;6(3):i-v.

3 American College of Sports Medicine. *Guidelines for exercise testing and prescription*. 4th ed. Philadelphia: Lea and Febiger, 1991.

Scheme in East Sussex has a database

EDITOR,—Steve Iliffe and colleagues' editorial on prescribing exercise in general practice may be misleading.¹ Regrettably, most doctors are uneducated about the effects of exercise in both health and disease and as a result either fail to advocate exercise as a treatment or have insufficient knowledge and time to explain to the sedentary patients most at risk. The editorial merely touches on the potential benefits of exercise, which are more fully stated in a report by the Royal College of Physicians²; but how many doctors are aware of these benefits, and if they are, how can they make an effective intervention?

Schemes in which general practitioners pres-