

Although we doubt that domestic violence causing stroke from extracranial arterial dissection is as common as Malek and colleagues imply, we do believe that obtaining a careful history for previous trauma, especially neck manipulation, may explain otherwise cryptogenic strokes, especially in the young.

*Zurab Nadareishvili, John W Norris

Stroke Research Unit, Sunnybrook and Women's College Health Sciences Centre, University of Toronto, Toronto M4N 3M5, Ontario, Canada

- 1 Malek AM, Higashida RT, Phatouros CC, Halbach VV. A strangled wife. *Lancet* 1999; **353**: 1324.
- 2 Brandt T, Hausser I, Orberk E, et al. Ultrastructural connective tissue abnormalities in patients with spontaneous cervicocerebral artery dissections. *Ann Neurol* 1998; **44**: 281-85.

Sir—A M Malek and colleagues¹ report a young woman with bilateral internal carotid stenosis after manual strangulation. This case reminds us of a 40-year-old woman who was admitted to our department for isolated left internal jugular vein thrombosis. No risk factor for thrombosis was found, including the use of oestrogen, ovarian hyperstimulation, or antiphospholipid antibody syndrome. Antithrombin, protein C, protein S, and activated protein C resistance were within the normal range. When questioned about possible direct trauma to her neck, she reported that her husband had tried to strangle her 3 weeks before. Evolution was uncomplicated after 3 months of oral anticoagulant.

Internal jugular vein thrombosis, an unusual site of venous thrombosis, has been described mainly in patients with ovarian hyperstimulation syndrome,² after trauma or cervical traction.^{3,4} Both carotid artery dissection and unexplained isolated thrombosis of jugular vein must raise the question of strangulation and domestic violence.

*Joseph Emmerich, Jean-Noël Fiessinger

Service de Médecine Vasculaire, Hôpital Broussais, 75674 Paris, France
(e-mail: josephemmerich@compuserve.com)

- 1 Malek AM, Higashida RT, Phatouros CC, Halbach VV. A strangled wife. *Lancet* 1999; **353**: 1324.
- 2 Ellis MH, Nun IB, Rathaus V, Werner M, Shenkman L. Internal jugular vein thrombosis in patients with ovarian hyperstimulation syndrome. *Fertil Steril* 1998; **69**: 140-42.
- 3 Duke BJ, Ryu RK, Brega KE, Coldwell DM. Traumatic bilateral jugular vein thrombosis: case report and review of the literature. *Neurosurgery* 1997; **41**: 680-83.
- 4 Simmers TA, Bekkenk MW, Vidakovic-Vukic M. Internal jugular vein thrombosis after cervical traction. *J Intern Med* 1997; **241**: 333-35.

Tuberculosis chemoprophylaxis for infants and teenagers

Sir—P R Donald (March 20, p 1001)¹ recommends preventive therapy for tuberculosis for infected infants and infected HIV-exposed teenagers, in high tuberculosis prevalence countries. Incidence of active tuberculosis among tuberculosis-infected infants (<1 year) was estimated to be nine in 100 in South Africa, and Donald uses these data to support his plea for chemoprophylaxis against the disease in this population. Although not explicitly stated, such high rates must have been estimated for a population not BCG immunised.

BCG vaccination of newborn babies and infants reduces the risk of tuberculosis by over 50% on average.² In 1996, BCG coverage at 1 year was 64% in sub-Saharan Africa, 91% in South East Asia, and 95% in South Africa.³ What then is the relevance of recommending tuberculosis preventive therapy for infants in high tuberculosis incidence countries where BCG coverage is high?

In a population of BCG-immunised, tuberculosis-infected infants in South Africa or any other country with similar tuberculosis incidence, the number to treat with tuberculosis chemoprophylaxis to prevent one case would in theory be no less than 22 (with 100 infected, nine cases, and 50% BCG protection). This estimate assumes that infected infants can be adequately targeted. Unfortunately the test used to diagnose tuberculosis infection (tuberculin skin test) is notoriously difficult to interpret after BCG vaccination; moreover, the test is often not available in less-developed countries. An alternative would be to systematically give chemoprophylaxis to all infants at high risk of infection (close contacts of smear-positive tuberculosis cases), but the number to treat would be even less favourable. M Donald also advocates preventive therapy for tuberculosis-infected pregnant teenagers and close contacts of smear-positive tuberculosis cases, in settings where HIV incidence is high. These groups, it is argued, are, or soon will be, sexually active, and therefore at risk of HIV infection; and the risk of developing active tuberculosis increases dramatically among people dually infected with tuberculosis and HIV. First, HIV-uninfected people cannot be seen as a priority for preventive therapy compared with HIV-infected people. Second, a short course of preventive therapy offers some protection against tuberculosis in people with tuberculosis

and HIV infection, at least in the short term, but long-term benefits remain to be shown⁴ because a short course of preventive therapy cannot prevent tuberculosis reinfection. Several workers have reported that recent transmission accounts for a substantial number of tuberculosis cases in adults, for instance more than 50% in a cohort of HIV-1-infected female sex workers in Kenya.⁵ Should teenagers be given preventive therapy for the rest of their sexually active life?

Tuberculosis control programmes in countries with high tuberculosis incidence are struggling to achieve acceptable cure rates and detection rates, and very few countries have met these priorities. Implementing preventive therapy runs the risk of diverting resources from efforts to attain these priorities. Where these priorities have been met, preventive therapy should first focus on groups in which it is mostly likely to be cost effective (HIV-infected people) and not on BCG-immunised infants or HIV-uninfected teenagers.

M-L Lambert

Department of Public Health, Institute of Tropical Medicine, 2000 Antwerp, Belgium

- 1 Donald P. Children and tuberculosis: protecting the next generation? *Lancet* 1999; **353**: 1001-02.
- 2 Colditz GA, Berkey CS, Mosteller F, et al. The efficacy of bacillus Calmette-Guérin vaccination of newborns and infants in the prevention of tuberculosis: meta-analysis of the published literature. *Pediatrics* 1995; **96**: 29-35.
- 3 The state of the world's children 1996. Geneva: UNICEF, 1997.
- 4 Wilkinson D, Squire SB, Garner P. Effects of preventive treatment for tuberculosis in adults infected with HIV: systematic review of randomized placebo controlled trials. *BMJ* 1998; **317**: 625-29.
- 5 Gilks CF, Godfrey FP, Batchelor BI, et al. Recent transmission of tuberculosis in a cohort of HIV-1-infected female sex workers in Nairobi, Kenya. *AIDS* 1997; **11**: 911-18.

Author's reply

Sir—M-L Lambert's comments about my proposals for protecting children against tuberculosis are appreciated. With respect to young children and infants exposed to sputum smear-positive tuberculosis, the possible protective effect of BCG may be overwhelmed by "excessive and indiscriminate exposure to . . . disease".¹ Many children born in communities with a high incidence of tuberculosis will be born in homes, or return to homes in which a case of sputum smear-positive tuberculosis may be present immediately after birth, before BCG can be expected to have any effect. Even if BCG has a 50% protective efficacy, a large number of infants are still unnecessarily exposed

to serious forms of tuberculosis, such as miliary tuberculosis and tuberculous meningitis, because of the very high incidence of disease after infection at this age. Many of these children are easily identifiable as contacts of sputum smear-positive adults. These adults must themselves be treated and it would surely cause a small increase in workload if the infected contact were to receive prophylaxis at the same time as the adult index case.

Working among communities with a very high rate of tuberculosis and HIV-infection I am only too well aware of the consequences of diverting resources from the main objective of identifying and treating adults with sputum smear-positive disease. However, we are not winning the battle and we need to be more adventurous in assessing all possible options. I do not suggest the immediate incorporation of various forms of preventive therapy in national programmes without first evaluating their value, but it might well be worth assessing the impact of high dose, fixed combination, multiple drug, short course, intermittent prophylaxis in certain situations. Since recent infection may account for a large number of cases of tuberculosis in adults, it would be interesting to know what the effect of high dose, short course, intermittent chemoprophylaxis might be if given to all close household contacts of an index case. This therapy could possibly prevent the development of sputum smear-positive tuberculosis in a certain number of individuals and so reduce the annual risk of infection, which must be the ultimate aim of all our tuberculosis control activities.

Peter R Donald

Department of Paediatrics and Child Health,
Faculty of Medicine, University of Stellenbosch,
Tygerberg 7505, South Africa

- 1 Rosenthal SR, Loewinson E, Graham ML, et al. BCG vaccination in tuberculous households. *Am Rev Respir Dis* 1961; **84**: 690-704.

Promotion of exclusive breastfeeding

Sir—Ardythe Morrow and colleagues (April 10, p 1226)¹ report the findings of a randomised controlled trial of peer counselling to promote exclusive breastfeeding and make an important contribution to the discussions about effective methods to increase breastfeeding. However, we have three concerns about the generalisability of their findings. The first concern is that the small number of women who may not have been representative of the population as a whole.

Representativeness may have been further reduced by the randomisation process which was by community rather than individual.

Our second concern arises from two key definitions used by the investigators. Morrow and colleagues state that "exclusive breastfeeding was defined by WHO criteria". However, they also included mothers who introduced supplementary feeding and then returned to exclusive breastfeeding as exclusive breastfeeders. According to the WHO criteria,² exclusive breastfeeding means only breastmilk with no other foods or liquids (apart from vitamins or medicines) from birth. The mothers in this study should arguably have been classified as predominantly breastfeeders. The health outcome for a baby who has received any supplementary feeding before age 3 months differs significantly from that of a baby who has been exclusively breastfed.³ The term peer counselling in the context of infant feeding usually refers to a woman who has previously successfully breastfed her baby for a minimum period. Morrow and colleagues used specially trained field workers rather than peer counsellors in the conventional sense.

Finally, Morrow and colleagues' study should be viewed in its cultural context. In Mexico breastfeeding is highly valued and initiation rates are high. The extent to which the study's findings can be applied to a more developed country is questionable. We investigated breastfeeding in a part of Scotland where bottlefeeding is the norm and found that most mothers in socially disadvantaged urban estates do not wish to breastfeed and those who do may find success elusive in an unsupportive environment.⁴ Morrow and colleagues' assertion that "the finding of this study are relevant to many countries" is unlikely to hold true in our region which has one of the lowest rates of breastfeeding in Europe.²

*Rhona J McInnes, David H Stone

Paediatric Epidemiology and Community Health (PEACH) Unit, Department of Child Health, University of Glasgow, Yorkhill Hospital, Glasgow G3 8SJ, UK

- 1 Morrow AL, Guerrero ML, Shults J, et al. Efficacy of home-based peer counselling to promote exclusive breastfeeding: a randomised controlled trial. *Lancet* 1999; **353**: 1226-31.
- 2 WHO. Global data bank on breastfeeding. Geneva: WHO, 1996.
- 3 Wilson AC, Forsyth JS, Greene SA, Irvine L, Hau C, Howie PW. Relation of infant diet to childhood health: seven year follow up of cohort of children in Dundee infant feeding study. *BMJ* 1998; **316**: 21-25.
- 4 McInnes R, Stone D. The Glasgow Infant Feeding Action Research Project: an evaluation of a community based

intervention designed to increase the prevalence of breastfeeding in a socially disadvantaged urban area. *Prenat Neonat Med* 1996; **1** (suppl 1): 130.

Authors' reply

Sir—The study included nearly all the eligible mothers in San Pedro Martir, and thus was representative of our target population. Sample size and cluster randomisation do not affect the representativeness of our study population. We entirely agree with Rhona McInnes and David Stone that our study should be viewed in its cultural context. We showed the efficacy of timely and accessible counselling to increase exclusive breastfeeding among mothers who live in a culture that values breastfeeding. In cultures that do not value breastfeeding, we would not expect such a dramatic increase. Nevertheless, the need for social and informational support for mothers who want to breastfeed seems to be universal, which is implied by McInnes and Stone's comment that in Scotland the few who elect to breastfeed "find success elusive in an unsupportive environment". Thus, peer counselling is used worldwide for breastfeeding promotion and support. Among the low-income populations in the US Women, Infants and Children Program, in which breastfeeding rates historically have been low, peer counselling increased rates of breastfeeding.¹

Although we agree that breastfeeding peer counsellors are usually mothers who have successfully breastfed, Eng and colleagues² point out that peer counselling can take various forms. The peer counsellors in our study met accepted definitions: they were residents of the same community, their educational attainment was typical of the community, and they were not health professionals. Our counsellors were trained by La Leche League, which has trained lay counsellors worldwide. Indeed, research indicates that the success of peer counsellors is dependent on their training and the support they receive from health professionals.¹ As a result, WHO, UNICEF, and other organisations have developed training courses and materials to help to ensure that breastfeeding counsellors are adequately prepared.³

We applied the WHO criteria for exclusive breastfeeding (no other liquids or foods given), with two specified time orientations. As we noted in our report, exclusive breastfeeding for up to 3 months postpartum was maintained by 50% of mother-infant pairs in the group visited on six