need to be qualified strongly by recognising that our cross sectional data preclude any analysis of changes in risk factors. Our conclusions are suggestive and need to be tested with longitudinal data; however, we are not aware of any longitudinal data sets that contain measures of the relevant risk factors at different stages of life, including childhood.

The data of the west of Scotland collaborative study were collected in the early 1970s. It would be useful to establish whether risk factors for cardiovascular disease are still related in the same way to father's and own social class. Although coronary heart disease is less prevalent in women than in men, any study of the current situation should include women.

Funding: Our study was supported by a grant from the NHS Management Executive, Cardiovascular Disease, and Stroke Research and Development Initiative.

Conflict of interest: None.

- 1 Barker DJP, ed. *Fetal and infant origins of adult disease*. London: BMJ Publishing, 1992.
- 2 Barker DJP, Martyn CN. The maternal and fetal origins of cardiovascular disease. *J Epidemiol Community Health* 1992;46:8-11.
- 3 Forsdahl A. Living conditions in childhood and subsequent development of risk factors for arteriosclerotic heart disease: the cardiovascular survey in Finmark 1974-75. *J Epidemiol Community Health* 1978;32:34-7.
- 4 Wadsworth MEJ, Cripps HA, Midwinter RA, Colley JRT. Blood pressure at age 36 years and social and familial factors. *BMJ* 1985;291:1534-8.
- 5 Bartley M, Power C, Blane D, Davey Smith G, Shipley M. Birthweight and later socioeconomic disadvantage: evidence from the 1958 British cohort study. *BMJ* 1994;309:1475-8.
- 6 Kaplan GA, Salonen JT. Socioeconomic conditions in childhood and ischaemic heart disease during middle age. *BMJ* 1990;301:1121-3.
- 7 Lynch JW, Kaplan GA, Cohen RD, Kauhanen J, Wilson TW, Smith NL, et al. Childhood and adult socioeconomic status as predictors of mortality in Finland. *Lancet* 1994;343:524-7.
- 8 Gliksmann MD, Kawachi I, Hunter D, Colditz GA, Manson JAE, Stampfer MJ, et al. Childhood socioeconomic status and risk of cardiovascular disease in middle aged US women: a prospective study. *J Epidemiol Community Health* 1995;49:10-5.
- 9 Brunner E, Davey Smith G, Marmot M, Canner R, Beksinska M, O'Brien J. Childhood social circumstances and psychosocial and behavioural factors as determinants of plasma fibrinogen. *Lancet* 1996;347:1008-13.
- 10 Burr ML, Sweetnam PM. Family size and paternal unemployment in relation to myocardial infarction. *J Epidemiol Community Health* 1980;34:93-5.
- 11 Arnesen E, Forsdahl A. The Tromso heart study: coronary risk factors and their association with living conditions during childhood. *J Epidemiol Community Health* 1985;39:210-4.

- 12 Notkola V, Punsar S, Karvonen MJ, Haapakoski J. Socioeconomic conditions in childhood and mortality and morbidity caused by coronary heart disease in adulthood in rural Finland. *Soc Sci Med* 1985;21:517-23.
- 13 Notkola V. Living conditions in childhood and coronary heart disease in adulthood. *Commentationes Scientiarum Socialium* 1985;29:15-119.
- 14 Hawthorne VM, Fry JS. Smoking and health: the association between smoking behaviour, total mortality and cardiorespiratory disease in west central Scotland. *J Epidemiol Community Health* 1978;32:260-6.
- 15 Ebi-Kryston KL, Hawthorne VM, Rose G, Shipley MJ, Gillis CR, Hole DJ, et al. Breathlessness, chronic bronchitis and reduced pulmonary function as predictors of cardiovascular disease mortality among men in England, Scotland and the United States. *Int J Epidemiol* 1989;18:84-8.
- 16 Davey Smith G, Shipley M, Hole DJ, Hart CL, Watt GCM, Gillis CR, et al. Explaining male mortality differentials between the West of Scotland and the South of England [abstract]. *J Epidemiol Community Health* 1995;49:541.
- 17 Marshall G, Rose D, Newby H, Vogler C. *Social class in modern Britain*. London: Unwin Hyman, 1988.
- 18 Goldthorpe JH. *Social mobility and class structure in modern Britain*. Oxford: Clarendon, 1980.
- 19 Hole DJ, Watt GCM, Davey Smith G, Hart CL, Gillis CR, Hawthorne VM. Impaired lung function and mortality risk in men and women: findings from the Renfrew and Paisley prospective population study. *BMJ* 1996;313:711-5.
- 20 Office of Population Censuses and Surveys. *Classification of occupations 1966*. London: HMSO, 1966.
- 21 Glass DV. *Social mobility in Britain*. London: Routledge, 1954.
- 22 Erikson R, Goldthorpe JH. *The constant flux: a study of class mobility in industrial societies*. Oxford: Clarendon, 1993.
- 23 Reid I. *Social class differences in Britain*. 3rd ed. London: Fontana, 1989.
- 24 Armitage P. *Statistical methods in medical research*. Oxford: Blackwell, 1971.
- 25 Hawthorne VM, Watt GC, Hart CL, Hole DJ, Davey Smith G, Gillis CR. Cardiorespiratory disease in men and women in urban Scotland: baseline characteristics of the Renfrew/Paisley (Midspan) study population. *Scott Med J* 1995;40:102-7.
- 26 Woodward M, Shewry MC, Cairns W, Smith S, Tunstall-Pedoe H. Social status and coronary heart disease: results from the Scottish heart health study. *Prev Med* 1992;21:136-48.
- 27 Shaper AG, Pocock SJ, Walker M, Cohen NM, Wale CJ, Thomson AG. British regional heart study: cardiovascular risk factors in middle aged men in 24 towns. *BMJ* 1981;283:179-86.
- 28 Marmot MG, Rose G, Shipley MJ, Hamilton PJ. Employment grade and coronary heart disease in British civil servants. *J Epidemiol Community Health* 1978;32:244-9.
- 29 Marmot MG, Davey Smith G, Stansfeld S, Patel C, North F, Head J, et al. Health inequalities among British civil servants: the Whitehall II study. *Lancet* 1991;337:1387-93.
- 30 Payne G. *Mobility and change in modern society*. London: Macmillan, 1987.
- 31 Fox AJ, Collier PF. Low mortality rates in industrial cohort studies due to selection for work and survival in industry. *Br J Prev Soc Med* 1976;9:180-5.
- 32 Braddon FEM, Rogers B, Wadsworth MEJ, Davies JMC. Onset of obesity in a 36 year birth cohort study. *BMJ* 1986;293:299-303.
- 33 Power C, Moynihan C. Social class and changes in weight-for-height between childhood and early adulthood. *Int J Obesity* 1988;12:445-53.

(Accepted 16 October 1996)

A randomised controlled trial of psychological debriefing for victims of road traffic accidents

Michael Hobbs, Richard Mayou, Beverly Harrison, Peter Worlock

Psychiatric problems are common after major or minor road accidents.¹⁻⁴ Mayou *et al* found that one fifth of victims developed an acute stress reaction and one quarter displayed psychiatric problems within the first year.¹ Long term psychiatric problems were mainly mood disorder (10%), phobic travel anxiety (20%), and post-traumatic stress disorder (11%). Interest has been stimulated in preventive interventions, especially routine psychological "debriefing." Although widely used after trauma, no randomised controlled trials of debriefing have been reported, and debriefing may sometimes increase distress.⁵ This randomised controlled study aimed to test whether a single debriefing could reduce post-traumatic psychopathology in road accident victims.

Subjects, methods, and results

The subjects were victims of road accidents admitted consecutively to the John Radcliffe Hospital. We excluded those who could not remember the accident

and those with no psychological symptoms, who are at low risk of later problems. Others were excluded because they had been discharged or were not available when the researcher came to visit them. Eight people refused to participate. Those who agreed were allocated randomly to intervention or control group using a random number table. All subjects were screened initially using a semistructured interview based on previous research and two standard self report questionnaires, the impact of events scale for specific post-traumatic symptoms and the brief symptom inventory, which generates a global emotional distress score.

Interventions were undertaken within 24-48 hours of the accident in most cases; they comprised an hour's debriefing combining a review of the traumatic experience, encouragement of emotional expression, and promotion of cognitive processing of the experience. Advice was provided about common emotional reactions, the value of talking about the experience, and early graded return to normal road travel. All experimental subjects received an information leaflet consolidating this advice and encouraging the support of family and friends. Both groups were reassessed by interview and the self report questionnaires at four months.

The intervention group (n = 54) had a higher mean injury severity score and longer hospital stay than the controls (n = 52), but there was no significant difference in baseline post-traumatic or other psychiatric symptoms. It proved difficult to interview patients

Warneford Hospital,
Oxford OX3 7JX
Michael Hobbs, consultant
psychotherapist
Richard Mayou, reader in
psychiatry
Beverly Harrison, research
assistant

John Radcliffe Hospital,
Oxford OX3 9DU
Peter Worlock, consultant
trauma and orthopaedic
surgeon

Correspondence to:
Dr Hobbs.

BMJ 1996;313:1438-9

Table 1—Baseline data and assessment of road accident victims before and after psychological intervention

	Intervention group (n = 54)*	Non-intervention group (n = 52)†
Baseline assessment		
Sex		
No of men	31	35
No of women	23	17
Median age (years) (range)	29 (18-67)	26 (17-69)
No of drivers	47	45
No of passengers	7	7
No in car	35	36
No on motorcycle	14	13
No in lorry or van	5	3
Median score on injury severity scale (range)	6.04 (1-33)	4.19 (1-19)
Median No of days' interval between accident and interview (range)	1.9 (1-9)	1.9 (1-10)
Median No of days' hospital stay (range)	7.7 (1-88)	3.7 (<1-18)
Mean (SD) score on impact of events scale	15.13 (14.82)	15.30 (12.35)
Mean (SD) emotional distress score	0.50 (0.53)	0.42 (0.32)
Follow up assessment		
Mean (SD) emotional distress score	0.62 (0.78)	0.38 (0.43)
Mean (SD) score on impact of events scale	15.97 (15.32)	12.87 (14.22)
No with distressing intrusive memories	9	5
Mean (SD) travel anxiety score	1.8 (1.68)	1.6 (1.7)
No with travel anxiety	18	16

*n = 42 for follow up assessment.

†n = 49 for follow up assessment.

during brief admissions to busy wards. Despite intensive efforts, follow up data were not obtained from 22% of the intervention group and 6% of controls. Non-respondents did not differ on baseline characteristics.

Neither group showed a significant reduction in specific post-traumatic symptoms, mood disorder, anxiety, the self reported measures, interview ratings of intrusive thoughts or travel anxiety, or clinical diagnosis of post-traumatic stress disorder or phobic anxiety (table 1). The intervention group had a worse outcome ($P < 0.05$) on two subscales of the brief symptom inventory, how-

ever, and a (non-significantly) poorer outcome in terms of emotional distress.

Comment

The study showed the practical difficulties of offering an early psychological intervention to road accident victims. Despite the small numbers and lack of complete follow up data, the findings are clinically convincing. Psychiatric morbidity was substantial four months after injury, with no evidence that debriefing had helped—and, indeed, indications that it might have been disadvantageous.

Several explanations are possible: rapid discharge from hospital necessitated very early intervention and some patients were still too numbed or distressed to be receptive; the intervention did not seem relevant to subjects expecting an uneventful recovery; a single intervention was inadequate for major emotional problems; and early interventions may disturb natural psychological "defences" against fear and distress.

We believe that later psychological intervention might better reduce psychiatric morbidity and that selective interventions designed to address specific emerging problems—for example, phobic avoidance of road travel—would be more effective than generalised psychological debriefing. Identifying patients at risk after discharge would, however, require effective collaboration between hospitals and general practitioners.

Funding: Oxford regional research fund.

Conflict of interest: None.

1 Mayou R, Bryant B, Duthie R. Psychiatric consequences of road traffic accidents. *BMJ* 1993;307:647-51.

2 Malt UF, Olafsen OM. Psychological appraisal and emotional response to physical injury: a clinical, phenomenological study of 109 adults. *Psych Medicine* 1992;10:117-34.

3 Blanchard EB, Hickling EJ, Mitnick N, Taylor AE, Loos WR, Buckley TC. The impact of severity of physical injury and perception of life threat in the development of post-traumatic stress disorder in motor vehicle accident victims. *Behav Res Ther* 1995;33:529-34.

4 Koopman C, Classen C, Cardena C, Spiegel D. When disaster strikes, acute stress disorder may follow. *Journal of Traumatic Stress* 1995;8:29-46.

5 Raphael B, Meldrum L, McFarlane AC. Does debriefing after psychological trauma work? Time for randomised controlled trials. *BMJ* 1995;310:1479-80.

(Accepted 28 October 1996)

A MEMORABLE PATIENT

An alien trying to get out

I was groping my way forward, lost in the pell mell of her narrative, trying to distinguish between hyperbole and the exaggeration of overwrought nerves and the possibility of a serious problem. A medically sophisticated American, and an in vitro fertilisation patient to boot, she enveloped me in a swirl of medical terms and medically phrased description and opinion, blurring my vision and clogging my analytical processes.

Suddenly a shaft of light: "And I kept on having this terrible abdominal pain, and they wouldn't listen—it was like an alien trying to come out of me." I knew then that we had a serious problem on our hands.

I find language fascinating, and used to enjoy the simplicity and directness of some North American speech. No ambiguous message such as "I was sick"—does "sick" stand for "nauseated," "vomiting," or "feeling generally unwell"? They would say I "upchucked" (Canada) or "I threw up" (United States), when they meant "vomiting"; leaving themselves free to say "I was sick to my stomach," when feeling nauseated and "I was blah" if generally

unwell. Latinisms and ambiguity are thus avoided. On the other hand, strange modesty could lead to grotesque, imprecise, and laborious euphemisms. For "my baby messed his nappy" (stool) and "my baby wet his nappy" (urine) out comes: "Junior went to the bathroom in his diaper" for both.

I allowed her to complete her story. She had driven herself to the clinic and her vital signs were normal—temperature, blood pressure, pulse—but when I laid a hand on her abdomen I knew it was "for real," as the Americans say, precisely. Her language had told the truth.

I shall remember this lady always, not so much for her unusual presentation (ruptured tubal ectopic, after intrauterine embryo implantation), as for her stunning simile and its uncanny prescience.—EDWARD LAVENDER is a general practitioner in Kuwait

We welcome filler articles of up to 600 words on topics such as *A memorable patient, A paper that changed my practice, My most unfortunate mistake*, or any other piece conveying instruction, pathos, or humour. If possible the article should be supplied on a disk.