who had it postnatally; we could find no references where this has been investigated previously.

The authors' analysis of risk factors highlights some common misconceptions: a quarter of all the women with eclampsia were parous, 18% of all the women with eclampsia were parous with no history of pre-eclampsia or eclampsia in previous pregnancies, and teenagers were at three times greater risk than older women. Overall, this paper is a sobering reminder of the vigilance required if we are to reduce further the morbidity and mortality from this relatively common condition.

EDWARD O'DONNELL

Registrar in obstetrics

DAVID SOMERSET

Senior house officer in obstetrics

Birmingham Maternity Hospital,
Birmingham B15 2TG

1 Douglas KA, Redman CWG. Eclampsia in the United Kingdom. *BMJ* 1994;309:1395-400. (26 November.)

2 Department of Health, Welsh Office, Scottish Home and Health Department, Department of Health and Social Services Northern Ireland. *Report on confidential enquiries into maternal deaths in the United Kingdom 1988-1990*. London: HMSO, 1994.

Authors' reply

EDITOR,—D G Daniel and R H Golding ask for more information on the women with eclampsia. Altogether 198 women were reported but excluded (60 after talking to consultants and 138 after the case note review) because they did not meet the criteria for the study. Seventy three of these had pre-eclampsia but no seizure; 56 had uncomplicated epilepsy; 40 had simple faints, hypoglycaemic fits, or pseudoseizures; and 29 had seizures without an apparent cause but did not have signs of pre-eclampsia.

Eighty nine women had a fit while under community based care, and for 64 of these we had access to a complete record of the care. Of the 64 women, six had hypertension alone, 11 had proteinuria alone, and five had hypertension and proteinuria documented before the onset of seizures. Twenty six of the 64 had been seen in the week preceding the fit.

The 27 women with multiple pregnancy were significantly less likely to have antepartum seizures than those with singleton pregnancies (relative risk (95% confidence interval) 0.18 (0.05 to 0.69)), but there were no significant differences between the two groups in terms of the presence of prodromal signs or symptoms, the gestation at onset of seizures, the number of seizures, or the ensuing maternal morbidity or mortality.

National data on number of previous stillbirths and live births do not exist, so that accurate calculation of rate of eclampsia in primiparous compared with multiparous women cannot be calculated accurately. Seventy one (99%) of the teenagers were primiparous compared with 215 (69%) of the women aged 20 or more. Part of the increased risk associated with teenage pregnancy may therefore be due to primiparity.

Whether or not the multigravidas had new partners was not determined, but 26 (27%) had a history of pre-eclampsia and one (1%) had a history of eclampsia. Multiparous women were significantly more likely to report prodromal symptoms than primiparous women (relative risk

1.31 (1.11 to 1.53)), but there were no significant differences in outcome measures.

Daniel and Golding's analysis of antenatal care assumes that eclampsia was uniformly spread through the last 112 days of pregnancy. Seizures were more common in the last four weeks of pregnancy, when it is routine to see women weekly; this helps to explain the high proportion of women seen within seven days of their seizure. Other women may have been brought back early or sought medical advice about symptoms. Our data are not detailed enough to supply this information.

There were no significant differences in the presence of prodromal symptoms (relative risk 1.00 (0.75 to 1.33)) or signs (1.08 (1.0 to 1.17)) between women who had postpartum eclampsia after caesarean section or vaginal delivery. We did not record whether ergometrine was used in the third stage of labour.

In answer to the questions raised by Edward O'Donnell and David Somerset, women with antepartum eclampsia had significantly higher systolic and diastolic blood pressures within one hour of the onset of seizures than those with postpartum seizures (table). This is consistent with the overall picture of antepartum eclampsia being a more severe condition.

K A DOUGLAS

Visiting research fellow

C W G REDMAN

Professor of obstetric medicine

Nuffield Department of Obstetrics and Gynaecology,

John Radcliffe Hospital,

Oxford University,

Oxford OX3 9DU

Treating leg cramp

Naftidrofuryl is a safe and effective alternative

EDITOR,—As part of their meta-analysis of the efficacy of quinine in treating leg cramp Malcolm Man-Son-Hing and George Wells review the pharmacological alternatives to quinine for this painful condition.¹ They fail to mention naftidrofuryl. In a double blind placebo controlled crossover study of cramp at rest we showed naftidrofuryl to produce both a significant reduction in the frequency of cramp and an increase in the number of days free of cramp.² Man-Son-Hing and Wells point out the possible serious side effects of quinine, and we suggest that naftidrofuryl should be regarded as an alternative, potentially less hazardous treatment for cramp at rest.

We agree with Man-Son-Hing and Wells that the condition is extremely common; indeed, we have shown a prevalence of 37% in the elderly population overall.³ Such a high prevalence further emphasises the need to use treatment with a low profile of side effects.

MARTIN J CONNOLLY

Senior lecturer

JB YOUNG

Consultant physician

Department of Care of the Elderly,

St Luke's Hospital,

Bradford BD5 0NA

Department of Geriatric Medicine,

Huddersfield National Health Service Trust,

Huddersfield Royal Infirmary,

Huddersfield HD3 3EA

J R NAYLOR

Consultant physician

1 Man-Son-Hing M, Wells G. Meta-analysis of efficacy of quinine for treatment of nocturnal leg cramps in elderly people. *BMJ* 1995;310:13-7. (7 January.)

2 Young JB, Connolly MJ. Naftidrofuryl treatment for rest cramp. *Postgrad Med J* 1993;69:624-6.

3 Naylor JR, Young JB. A general population survey of rest cramps. *Age Ageing* 1994;23:418-20.

The trial of naftidrofuryl² received support from Lipha Pharmaceuticals, which provided the active drug and placebos, randomisation envelopes, and trial booklets to monitor patients recruited to the trial.

Study quoted had flawed design

EDITOR,—In their meta-analysis of the efficacy of quinine for night cramps Malcolm Man-Son-Hing and George Wells analysed six trials that met strict criteria for design.¹ Included in these six trials is one carried out by one of us (NRD) in 1991 on patients from his practice and a practice in Southampton.² It is surprising that the authors included the data from this trial, since it was stated clearly that the results showed that the design of the trial was invalid. As the table shows, there was a clear carryover effect: patients who received quinine first, followed by placebo, experienced more nights with cramp in the placebo period than did those who received the placebo first. The test for carry over is significant (Mann-Whitney $W=247.5$, $P<0.05$).

Proportion of nights with cramp

Treatment	1st Period (n=750)	2nd Period (n=750)	Both periods (n=1500)
Quinine	203 (27)	104 (14)	300 (20)
Placebo	278 (37)	488 (65)	765 (51)

Because of the carryover effect the only valid comparison was between the two treatments in the first period. The difference was not significant (Mann-Whitney $W=183$, $P=0.37$). The use of the combined figures for both periods by the authors of the meta-analysis is therefore not legitimate. The results from this trial suggest that the withdrawal of quinine after four weeks' treatment tends to induce leg cramps. This effect is difficult to explain and has not been reported elsewhere.

N R DUNN

General practitioner

Poole,
Dorset BH18 8BQ

M CAMPBELL

Reader in medical statistics

Department of Medical Statistics,

Southampton General Hospital,

Southampton SO9 4XY

1 Man-Son-Hing M, Wells G. Meta-analysis of efficacy of quinine for treatment of nocturnal leg cramps in elderly people. *BMJ* 1995;310:13-7. (7 January.)

2 Dunn NR. Effectiveness of quinine for night cramps. *Br J Gen Pract* 1993;43:127-8.

Protection afforded by cycle helmets

EDITOR,—According to Richard Keatinge and Ruth Parry, we "defy engineering evidence [unspecified] in stating that cycle helmets reduce the risk of serious head injury in accidents involving motor vehicles."¹ They take us to task for not having mentioned the paper of Spaite *et al.*² We referred to this paper in our report in 1993,³ which we referenced in the letter to which Keatinge and Parry are responding.⁴ Spaite *et al.* found that injuries to the head and body were less severe in helmeted riders. Sex and age were separately associated with use of a helmet, severity of injury, and mortality. In these circumstances a more sophisticated analysis was warranted, and Spaite *et al.*'s conclusion that helmet wearing was simply a

Comparison of blood pressures in women with antepartum onset of seizures and women with intrapartum and postpartum onsets. Figures are means (SD)

	Antepartum onset (n=147)	Intrapartum and postpartum onsets (n=236)	Significance*
Last systolic pressure (taken within one hour of onset of seizures) (mm Hg)	166 (26.2)	156 (21.2)	5.67, $P=0.017$
Last diastolic pressure (taken within one hour of onset of seizures) (mm Hg)	105 (14.2)	94 (14.0)	18.05, $P<0.001$
Maximum recorded systolic pressure (mmHg)	185 (26.0)	179 (20.7)	4.51, $P=0.034$
Maximum recorded diastolic pressure (mm Hg)	120 (13.0)	113 (11.6)	26.49, $P<0.001$

*Kruskal-Wallis H test (1 df).