

leagues, emphasises the potential danger of this rare reaction to heparin.

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1 Hunter JB, Lonsdale RJ, Wenham AW, Frostick SP. Heparin induced thrombosis: an important complication of heparin prophylaxis for thromboembolic disease in surgery. *BMJ* 1993;307:53-5. (3 July.)

2 Shelly MP, Majer RV, Perkins C, Pierce T, Nielsen MS. White clot syndrome and continuous arteriovenous haemofiltration. *Intensive Care Medicine* 1990;16:334-5.

Datasheet warns of risk

EDITOR,—James B Hunter and colleagues state that heparin induced thrombotic events associated with thrombocytopenia are not mentioned in manufacturers' datasheets.¹ Calciparine (Sanofi Winthrop) was the brand given to the patients described.

The current datasheet for Calciparine states: "In common with other heparin preparations: . . . Acute thrombocytopenia, usually reversible, has been reported. Rarely there have been reports of severe thrombocytopenia which may be complicated by venous or arterial thrombotic episodes. Platelet counts should be measured in patients under heparin therapy for longer than 5 days and treatment should be stopped in those who develop significant thrombocytopenia." The datasheet was changed to take account of this complication in March 1991; Hunter and colleagues' paper was accepted on 25 March 1993.

We agree with the authors' recommendation that baseline platelet counts should be obtained in all patients receiving heparin for more than five days.

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1 Hunter JB, Lonsdale RJ, Wenham AW, Frostick SP. Heparin induced thrombosis: an important complication of heparin prophylaxis for thromboembolic disease in surgery. *BMJ* 1993;307:53-5. (3 July.)

Annual influx of temporary residents

To the Glastonbury Festival . . .

EDITOR,—The Glastonbury Festival is an annual three day music event that attracts about 85 000 people, a figure similar to the population of the city of Bath. The Royal United Hospital NHS Trust usually serves 410 000 people locally. This transitory influx of festival goers greatly swells the population in the catchment area. This year we audited the pattern of attendances and admissions to the trust from the festival to quantify the extra work load placed on the trust's acute specialties and to estimate the cost of this health care to the trust and the wider NHS.

Attendees to the accident and emergency department from the festival were identified prospectively. Those admitted directly to the on call teams were located by discussions with the hospital's bed bureau and the teams themselves.

Over the week surrounding the festival the trust saw 53 patients from the festival site, of whom 24 (45%) were admitted. Of those admitted, 10 (42%) patients required 16 operations in total, taking up 24 hours of operating theatre time. Inpatient ward care totalled 364 days; in addition, 31 days of intensive care bed occupancy were required.

We have conservatively estimated the cost to the NHS of the Glastonbury Festival, for those

patients seen initially at the Royal United Hospital NHS Trust, to be £114 000. Although this figure will largely be met by the trust, some of the cost will be met by other trusts after transfer of patients requiring additional care.

Sources exist from which the trust can recoup some of its costs: its purchaser unit and extra-contractual referrals from distant purchasers for emergency care. The absolute maximum that could be recouped in this way has been calculated to be approximately £64 000, leaving a shortfall of at least £50 000. This deficit must be met at the cost of health care for the local population.

Some 85 000 people paid a reported £58 each to attend the Glastonbury Festival, raising a considerable sum for the organisers. In an era when the National Health Service is hard pressed for funding, surely the time has come when organisers of large profitmaking events should include medical insurance in the price of the ticket. This insurance would then provide adequate funds for the affected trusts to recoup the cost of the additional work.

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. . . and to radiology departments

EDITOR,—Now that the holiday season is upon us and patients are roaming around the country injuring themselves, may I suggest in the interests of economy that if a patient has an x ray examination and a follow up is organised at a different hospital, the patients are given the x ray films to have.

In my fracture clinic today I have had to repeat x ray examination unnecessarily in four patients who have come from other hospitals without their films. The argument that the patients may lose their films is untenable. It is a system that works very well in the private sector. In the NHS pregnant women often hold their own maternity records.

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Hepatitis A virus infection

Risk to sewage workers unproved

EDITOR,—C J M Poole and A T Shakespeare suggested that sewage workers may have a significantly increased risk of infection with hepatitis A virus.¹ It is difficult to draw such a conclusion on the basis of the data presented. The authors themselves acknowledge the limitations imposed by the small size of their study. In addition, bias may have been introduced as both cases and controls volunteered when the purpose of the study was explained. No information was provided about exposure to other potential risk factors for hepatitis A virus infection. The controls were apparently matched for age and social class with the cases, yet the analysis was not a matched analysis. The odds ratio of prior hepatitis A virus infection among sewage workers and all controls was estimated and reported to be significantly increased. I have reanalysed the data presented and found no significant increase in the risk of prior exposure to hepatitis A virus in sewage workers compared with their "matched" controls (road workers) (odds ratio 2.71 (95% confidence interval 0.74 to 10.23)).

Thus, though the suggestion that sewage workers

may be at increased risk of hepatitis A virus infection is certainly plausible, this study does not provide any data to support this claim. The results of a recent case-control study of hepatitis A infection in England do not confirm an increased risk of hepatitis A virus infection among sewage workers (Public Health Laboratory Service Communicable Disease Surveillance Centre, unpublished data). Poole and Shakespeare are right to suggest that it would be important to test a larger sample of sewage workers for an association between hepatitis A virus infection and type of work as well as length of employment.

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1 Poole CJM, Shakespeare AT. Should sewage workers and carers for people with learning disabilities be vaccinated for hepatitis A? *BMJ* 1993;306:1102. (24 April.)

Authors' reply

EDITOR,—We studied only volunteers, but all the sewage workers employed by Dudley and Wolverhampton local authorities took part in the study. We acknowledged in our paper that there may have been bias in the recruitment of controls and carers of people with learning disabilities. Confounding variables such as overseas travel, homosexuality, and the eating of shellfish should occur in similar proportions in both subjects and controls.

It is inappropriate to use matched statistical analysis as there were not equal numbers of subjects and controls and they were not individually matched. Since the proportions of seropositive road workers and office workers were similar there did not seem to be a social class effect, and so controls were treated as one group. Furthermore, we are not aware of any data supporting a relation between social class and seropositivity for hepatitis A virus in Britain.

The proportion of subjects who were seropositive was significantly higher in the sewage workers than all the controls if the uncorrected χ^2 and Miettinen's test based method is used ($\chi^2=4.25$, $p=0.039$, odds ratio=2.60 (95% confidence interval 1.05 to 6.46)) but not if Yates's correction is applied to the χ^2 test ($\chi^2=3.37$, $p=0.066$, odds ratio=2.60 (0.94 to 7.21)). We agree that if only the road workers are used as controls the difference is no longer significant (uncorrected $\chi^2=2.90$, $p=0.089$, odds ratio=2.71 (0.86 to 8.54)); corrected $\chi^2=2.01$, $p=0.156$, odds ratio=2.71 (0.68 to 10.75)).

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No conclusive link to factor VIII

EDITOR,—Reports of hepatitis A virus infection in people with haemophilia in Italy, Germany, Belgium, and Ireland have rightly raised concern that current factor VIII concentrates may transmit this virus.¹⁻⁴ This hypothesis was discussed in Edinburgh at a meeting of the European Plasma Fractionation Association in May attended by representatives from the United Kingdom, Ireland, France, Finland, Denmark, Germany, Holland, Belgium, Australia, and the United States.

Epidemiological data for the reported cases is suggestive¹⁻⁴ but a conclusive link between infection and defined batches of factor VIII concentrates has yet to be established. The outcome of an ongoing case-control study in Ireland is awaited with particular interest. Infection could also be community acquired or due to a failure in factor VIII processing, rather than plasma contamination. For