So we have one story, wildly reported, and by appearing in print gaining the substance of fact. What is a fact is that all the frequent discussion of this case has not resulted in the publication of one other case. It is important, therefore, that everyone should know the story so that inaccuracies can be refuted as soon as they are uttered, not after they have been published.

My thanks go to Mr Philip Cordrey, Contact Lenses Manufacturing Ltd, for supplying me with the correspondence which is the substance of this letter.

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British Contact Lens Association

London

¹ Report to the Royal Society for the Prevention of Accidents from the Consultant Ophthalmic Surgeon to the Department of Employment, November 1973.

² Ruben, M, open letter on behalf of the Contact Lens Society, February 1976.

³ Circular to employees of Thames Valley Water Authority from the Senior Resident Engineer, 16 July 1975.

⁴ *Journal of Occupational Safety and Health*, October 1973.

Barbiturates and fractures

SIR,—Drs J B and E T Macdonald (20 August, p 483) have shown a highly significant correlation between the ingestion of barbiturate hypnotics and nocturnal fractures of the femur. It is curious that none of the patients sustaining fractures in the afternoon were on barbiturates; it would be expected that fractures would occur with an equal incidence in patients on barbiturates and those on non-barbiturate hypnotics if neither drug affected the likelihood of fractures occurring at this time. Either barbiturates protect against afternoon fractures (which seems unlikely) or other hypnotics predispose to fractures occurring in the morning and afternoon. Unfortunately there is no comparison of the temporal incidence of fractures in patients not taking hypnotics (a reflection, perhaps, of the overuse of these drugs in the elderly), so that neither intriguing possibility can be explored. It would also be interesting to know if there was a significant correlation between non-barbiturate hypnotic use and frequent falls, as there was with barbiturate use.

There is a high incidence of osteomalacia in elderly patients with fractures of the femur¹; and osteomalacia is a recognised complication of the chronic ingestion of long-acting anti-convulsant barbiturates² (for example, phenobarbitone), which reduce the level of circulating 25-hydroxycholecalciferol³ by inducing hepatic microsomal enzymes. This effect is likely to be of particular significance in the elderly, whose nutritional status with respect to vitamin D may already be less than ideal. That this may occur with other barbiturates (those with shorter plasma half lives, used as hypnotics) is suggested by the results of a recent survey in which patients taking these drugs were found to have lower serum calcium concentrations than controls.⁴ Though there was no significant increase in serum alkaline phosphatase activity in these patients and only 26.4% of the patients with fractures in the Macdonalds' survey were taking barbiturates in comparison with from 41% to 51% of newly referred outpatients (the increase between 1973 and 1976 is itself a worrying trend), the possibility of an increased incidence of osteo-

malacia is another reason for not prescribing barbiturate hypnotics in the elderly.

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¹ Jenkins, D H R, *et al*, *Journal of Bone and Joint Surgery*, 1973, **55B**, 575.

² Dent, C E, *et al*, *British Medical Journal*, 1970, **4**, 69.

³ Hahn, T J, *et al*, *New England Journal of Medicine*, 1972, **287**, 900.

⁴ Young, R E, *et al*, *Postgraduate Medical Journal*, 1977, **53**, 212.

SIR,—Drs J B and E T Macdonald (20 August, p 483) are to be congratulated on their excellent article. Should one prescribe barbiturates other than for epilepsy, then we initiate the hazard of addiction and poisoning. So often it is thought that our patient is the exception to the rule. It is highly dangerous to imagine any exceptions to this rule. Confusion, even dementia and terminal illness, are not always recognised as being related to chronic barbiturate administration.

Alas, I doubt whether this informative article will affect our prescribing. Fortunately a summary appeared in *The Times* of 19 August and this may be more effective. An American lawyer pointed the article out to me and the sooner relatives query every barbiturate prescription the sooner this problem will decrease.

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Superior vena caval obstruction complicating fiberoptic gastroscopy

SIR,—The case reported by Dr J Dawson (6 August, p 368) raises several interesting points.

Although the complication was unavoidable in his patient, its occurrence emphasises the need to avoid immediate endoscopy in patients with mediastinal obstruction and to wait until radiotherapy has reduced the obstruction. There is little urgency for a tissue diagnosis, as almost all these patients have carcinoma of the bronchus, though 2-3% have other tumours, and benign causes of superior vena caval obstruction are now very rare.¹

The second point is his comment that superior vena caval obstruction is an uncommon complication of carcinoma of the bronchus. In fact it occurs in 10-15% of these patients—that is, 3000-4500 patients every year in Britain. Its incidence is comparable to that of carcinoma of the bladder or of the oesophagus.

Lastly, although pain is often a feature of carcinoma of the bronchus, it is not a specific feature of superior vena caval obstruction.

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¹ Howard, N, *Mediastinal Obstruction in Lung Cancer*. London and Edinburgh, Livingstone, 1967.

Nocturnal infusions

SIR,—I was pleased to see the paper by Mr I H Frazer and others (23 July, p 232) confirming that the incidence of infusion phlebitis is directly related to the duration of infusion. However, as pointed out previously,¹ the pre-

vention of thrombophlebitis is not the only reason for taking down infusions at night. Keeping infusions going overnight is rarely necessary as well as being unphysiological and potentially dangerous. At night fewer nurses are on duty and the darkness makes it difficult to keep an accurate check on infusions. With no nocturnal infusion the patient sleeps better—fewer checks by the nurses are required and the need to pass urine is reduced—and there is less chance of overloading the patient with fluid. In addition other patients in the ward have a more peaceful night and the nurses are free to attend to other duties.

The disadvantages of such a policy are the cost of extra infusion sets and the fact that housemen will have to put up infusions more frequently. However, as the infusions have to run for only 12-18 hours, smaller needles, which are easier to insert, can be used. Surely more peaceful nights for all patients in the ward and fewer complications more than compensate for these minor disadvantages. An added bonus for the houseman is that he is not disturbed at night because of trouble with his infusions.

In short, I maintain that except for intensive care and for the first postoperative night nocturnal infusions are rarely indicated, are potentially dangerous, and are unfair to our patients and our nurses.

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¹ Sturzaker, H G, *British Medical Journal*, 1975, **4**, 163.

Zinc again

SIR,—Your leading article (11 June, p 1493) comments on two papers which describe the apparent beneficial effects of oral zinc sulphate on acne vulgaris.^{1,2} Although "it is far too early to assess the full meaning of the findings," you hint that this work should be expanded and confirmed. However, we feel that the following comments are warranted before large-scale trials using oral zinc sulphate are started.

In their clinical study Michaëlsson *et al*¹ included a placebo group of 14 patients but "for ethical reasons" added oral zinc sulphate to their treatment after only four weeks of the 12-week study. With a placebo effect of between 19 and 56% improvement in acne vulgaris we feel it would not have been unethical to continue placebo until 12 weeks and provide data for meaningful analysis.

Our second point concerns the dosage of oral zinc sulphate. In Michaëlsson's studies each patient received a total daily dose of 600 mg effervescent zinc sulphate, equivalent to 135 mg of ionic zinc, which is many times the US National Research Committee's recommended dietary allowance of 15 mg ionic zinc per day. Although toxic side effects from oral zinc sulphate are said to be rare,³⁻⁵ acute zinc toxicity, manifest as nausea, vomiting, diarrhoea, and haemolytic anaemia, has been documented as occurring in patients with chronic renal failure receiving intermittent haemodialysis.^{6,7} Acute toxicity occurred with venous plasma levels of 45 $\mu\text{mol/l}$ (294 $\mu\text{g}/100\text{ ml}$). Unpublished work by Glover has shown that one 220-mg capsule of zinc sulphate causes the venous plasma zinc concentration to rise from a normal fasting value of 15.3 $\mu\text{mol/l}$ (100 $\mu\text{g}/100\text{ ml}$) to an average value of 40.1 $\mu\text{mol/l}$ (262 $\mu\text{g}/100\text{ ml}$) at 1½-3 hours. Several of the volunteers in this study became