# Letters to the Editor

## TREATMENT OF SCIATICA

SIR,—In your annotation of Dec. 29 (p. 1483) you rightly emphasise the scarcity of data to show that any special non-operative treatment for backache and sciatica is better than " doing nothing at all ". But bed rest is not in your list of treatments, perhaps because it has become unfashionable with doctors and is unpopular with patients. A current investigation, supported by Tenovus Scotland, reveals that some patients referred for operation for lumbar disc disease have never had even a week in bed; only some of these had ever been advised to go to bed. It seems likely that many patients, and some doctors, regard bed rest as equivalent to " doing nothing at all ".

The relationship between the benefits of traction and of bed rest requires careful exploration. It is probable that recumbency reduces the forces acting on the lumbar discs by a much greater factor than any form of traction. Those doctors who claim benefit from continuous traction in bed should consider the possibility that it provides no more than an elaborate mechanism for keeping their patients in bed. At least the paraphernalia of traction dispels the idea that the doctor is " doing nothing at all ".

Institute of Neurological Sciences,
Southern General Hospital,
Glasgow G51 4TF. BRYAN JENNETT.

## REGRESSION OF LIVER CANCER WITH ORAL UREA

SIR,—After observing anti-cancer activity in urea,[1] we have tested the effects of this agent on two main groups of patients. On another page we report the effects of local urea injections on skin cancers; and here we describe our results with oral urea in 18 patients with liver cancer. Our aim was to produce high local concentrations in the liver via the portal bloodstream. 8 patients had primary carcinoma and 10 had tumours with liver metastases. Of the 6 men and 2 women with primary carcinoma, all but 1 had a histological diagnosis. The remaining woman had a characteristic clinical picture and liver scan. Their ages ranged from 50 to 73 years. In the 8 women and 2 men with liver metastases the primaries were stomach (1), ovary (1), breast (3), colon (2), and melanoma (3).

2–2·5 g. pure synthetic urea was given 4–6 times daily (in capsules or syrup, or as powder), without interruption. Cirrhosis, hepatitis, and kidney failure were contraindications to the treatment. Advanced primary or metastatic cancers which have destroyed more than 30–35% of the liver tissue (3rd or 4th stage) are also contraindications. Bed rest was recommended for the first 2–3 months.

In the primary-cancer group 2 patients are alive after 57 and 36 months. In 4, death appeared to be related to interruption of urea treatment (patients were not told the diagnosis and therefore tended to stop treatment when they felt better). 2 patients died of apparently unconnected illnesses—pneumonitis and myocarditis. Average survival from the start of urea treatment is 26·5 months.

In the metastatic group the efficacy of urea treatment cannot be judged by survival, since tumour tissue outside the liver was probably not affected. Therefore we concentrated on the state of the liver. On urea treatment all patients had a reduction of their liver enlargement. 4 patients are still alive. 2 who had liver metastases from breast and colon, respectively, are alive and well at 19 and 13 months. 2 with metastatic melanoma survive, 1 in good general condition at 17 months and the other, with general disseminated disease and moderate liver enlargement (stable for 8 months), at 40 months.

Two illustrative case-reports follow:

*Case 1.*—A 66-year-old man had an egg-sized tumour at the left of the gallbladder. At laparotomy there were many smaller nodules in both liver lobes. Biopsy specimens showed hepatoma. Postoperatively his liver was palpable 8 cm. below the costal margin; he had lost his appetite and his weight was down 6 kg. Urea treatment began on March 7, 1969. After 10 months the liver was impalpable except for the egg-like tumour, which was smaller. The erythrocyte-sedimentation rate (E.S.R.) had fallen from 75 to 8 mm. in the 1st hour, and weight had increased by 15 kg. Twice he interrupted treatment for 30–40 days and on each occasion his liver enlarged, he lost his appetite, his weight fell, and his E.S.R. rose. On resuming treatment he improved. There was a similar exacerbation 6 months ago when he had a virus infection, but he improved afterwards. He is alive 4 years and 9 months atfer the start of urea treatment.

*Case 2.*—A gastrojejunostomy was made in a woman aged 65 because of pyloric stenosis caused by an extensive stomach cancer. At laparotomy an egg-like tumour mass extended into the base of the liver from the lesser curvature of the stomach. On the surface of both liver lobes there were many nodules the size of hazel-nuts or almonds. The liver edge reached the umbilicus. Urea treatment began on April 3, 1969. After 4 months the nodes on the liver surface were impalpable and the egg-like mass was half its former size. In 10 months the liver was impalpable and the patient had gained 28 kg. But after 16 months there were symptoms indicating stenosis of the gastrojejunostomy, and 2 months later she died. At necropsy numerous metastases were found in most organs, but the size and weight of the liver were normal. On the surface there were areas of local capsular thickening corresponding to the previous nodules. There was one hazel-nut-sized nodule at the site of the original liver mass.

In primary liver carcinoma the average survival of 26·5 months was five times greater than has been previously reported with or without treatment.[2–4] Undoubtedly the best results are achieved with resection, but operable patients are in the minority.[5,6] With advanced metastatic cancer the outlook is almost universally poor.

Urea is inexpensive, non-toxic, and without side-effects. We think that our results justify formal trial of urea in primary liver cancer and also in metastatic cancer. Often cancer of the abdominal organs is not operated on because small metastatic nodules are present in the liver. In these cases we think that removal of the primary, plus postoperative urea therapy continued indefinitely, might be of value.

Rigillis 26,
Athens,
Greece. EVANGELOS D. DANOPOULOS
IPHIGENIA E. DANOPOULOU.

## SMOKING AND DOCTORS

SIR,—I agree with Dr Hedley (Dec. 29, p. 1402) that it is futile to attempt to meet the £50 million campaign of the tobacco firms on equal financial footing. This leaves two alternatives. The first a sort of David and Goliath approach to the really quite vulnerable giant by hinting, and perhaps later convincing people, that all those leafy glades, mountain streams, alpine scenes, expensive sports cars, and beautiful girls are essentially the heritage of the non-smoker: he it is who is far more likely to be fit enough, rich enough, and socially acceptable enough to enjoy them. The second is that the public must be continually reminded that we do not live in a free world in a sense that we are free to do things which will harm our fellow men—free to drive motor cars in a dangerous condition, deal in hash,

1. Danopoulos, E. D. *Archs Hellenic Anticancer Inst.* 1970, **6**, 174.
2. Ariel, I. M., Pack, G. T. *Cancer*, 1967, **20**, 793.
3. Phillips, R., Murikani, K. *ibid.* 1960, **13**, 714.
4. Nelson, R. S., et al. *ibid.* 1966, **19**, 533.
5. Miller, T. R. *Rec. Results Cancer Res.* 1970, p. 293.
6. Bengmark, S., et al. *Scand. J. Gastroent.* 1971, **6**, 351.