I would not like to say that general practitioners "have to take all the really big decisions in the management of patients," but I *do* say that they take the majority of such decisions.—I am, etc.,

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SIR,—The future of general practice has been much discussed in your columns. Remuneration and the method by which it is calculated and distributed is an obvious focus for discontent. Beyond this, however, there is widespread dissatisfaction.

The President of the Association (July 20, p. 133) recently spoke of the importance of preserving the ethos of medicine. In the field of general practice we are in danger of losing our ethos altogether. Not because there are large numbers of bad general practitioners; but for the reason that there are far too many trying to give a service and cope with the ever-increasing public demand, in circumstances and surroundings which through no personal fault are totally inadequate for this day and age.

While there are many excellent examples of interpractice co-operation and group practice, there are too many practitioners who for one reason or another are left out. They have no satisfactory deputizing arrangements and must perform their daily task under a heavy burden of fatigue and anxiety.

The general-practitioner service has a major part to play in the future. The family doctor must have properly designed space in which to do his work. He requires the assistance of trained ancillary staff, such as receptionists, secretaries, nurses, health visitors, and social workers, to give the full benefit of his training to his patient. He requires time for rest, refreshment, and study. These arrangements cannot be economically provided for the single-handed practitioner or for the small partnership. They can only become a practical proposition for a group of doctors working together.

I am not in any way advocating a salaried service, and I am thinking in the main of doctors practising in densely populated areas. As a first step forward, practitioners should form themselves into groups of six to eight, either voluntarily or by persuasion or guidance from executive councils. Each group would be mutually self-supporting for holidays, study leave, sickness, and off-duty rotas, although not necessarily entangled financially in a partnership.

The next step is for each group to practise together from centrally placed premises in their area, be it a converted house or a specially designed prefabricated building. Such buildings could be produced in quantity and could well be distributed in the next 10 to 15 years throughout the country. The supply and maintenance of the premises must be the responsibility of the Ministry of Health. After all, the N.H.S. Act, 1946, promised these things, but we have been led astray by the extravagance of the few health centres that have been built.

The establishment of these group centres would of course eliminate the individual doctor's surgery, but in conjunction with the local health authority services provide for maternity and child welfare, school clinics, and geriatric services, and so constitute the complete concept of the domiciliary health service. Although the patient might well have to travel a little further to the group centre, such arrangements could not fail to be to everyone's advantage and benefit, where there would be time and opportunity and help to do good and satisfying work.

Such a scheme would of course be enormously expensive. If general practice is to survive, however, large capital sums must be spent. This is a task for the financial resources of the nation, and not for the individual doctor or groups to provide. The nation can only obtain the domiciliary health service that it is prepared to pay for, and in the first 15 years it has been content as a whole and as individuals to take more out of the bucket than it has put in.—I am, etc.,

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Jaundice After Halothane and Radiotherapy

SIR,—We read with interest the articles by Mr. G. Chamberlain (June 8, p. 1524) and Dr. Michael Johnstone (July 27, p. 254) on liver damage following halothane anaesthesia. We wish to report three cases of non-obstructive jaundice following halothane anaesthesia at this hospital over the past two years, in which there were other factors besides the administration of halothane.

In each case the premedication was "phenergan" (promethazine) 25 mg., pethidine 75 mg., and "scopolamine" (hyoscine) 1/50 gr. (1.3 mg.). Anaesthesia was induced with thiopentone. Succinyl choline and curare were given for the hysterectomy.

Case 1.—A patient aged 42 years was admitted on August 9, 1961, with a stage II carcinoma of the cervix. On August 14 biopsy of the cervix and cystoscopy were performed under the anaesthesia described above. This was followed by a course of deep *x*-ray therapy to the pelvis, and on September 4 she received her first intracavity radium insertion. She was discharged on September 7. She was readmitted on September 10 with jaundice. The jaundice rapidly faded, her general condition improved, and on September 18 a further radium insertion was performed. On September 25 there was a third radium insertion. Following this she developed slight jaundice, but for personal reasons she took her own discharge home on September 28. The jaundice rapidly increased in severity and she developed gross ascites. Paracentesis abdominis was performed and 6½ pints (3.7 litres) of fluid were withdrawn. Following this the jaundice gradually lessened over a course of three weeks. When seen in the out-patient department on November 2 she was still slightly jaundiced, and the liver was palpable three fingerbreadths below the costal margin. She was readmitted on December 10 complaining of vaginal discharge, and examination under halothane anaesthesia was performed. There was no exacerbation of jaundice following this anaesthetic.

Case 2.—The patient, aged 58, was admitted on March 1, 1962, suffering from carcinoma of the cervix stage I. On March 5 dilatation and curettage and biopsy of the cervix were performed under general anaesthesia. She afterwards had three insertions of intracavity radium. After the third she developed non-obstructive jaundice. The liver edge was just palpable below the costal margin. She gradually improved over a period of one month with symptomatic treatment. She has remained well ever since.

Case 3.—A patient aged 59 years was admitted on May 4, 1963, suffering from carcinoma of the corpus. On May 6 dilatation and curettage was performed and intracavity radium was inserted. On May 20 a second dose of radium was given. On June 10 an extended hysterectomy and bilateral salpingo-oophorectomy was performed. There was no evidence of secondary deposits in peritoneum, omentum, or liver. During operation one pint (0.6 litre) of whole blood was transfused. On June 11 she developed jaundice (non-obstructive). The depth of jaundice gradually increased and the patient became extremely ill with anorexia and vomiting.

The liver was palpable below the costal margin, smooth, and soft. She continued to deteriorate and on June 22 serum bilirubin was 21 mg./ml. Treatment with prednisolone 20 mg. a day was instituted, and from then on her condition gradually improved. On June 26 serum bilirubin was 13 mg. and serum glutamic pyruvic transaminase (S.G.P.T.) 310 units/ml. From July 6 the dosage of prednisolone was gradually reduced, and she is now continuing on 10 mg. prednisolone for a further three weeks before further reduction. She is now well and on July 26 serum bilirubin was 1.9 mg./ml., and S.G.P.T. 16 units/ml.

The common factors in these three non-fatal cases of hepatitis are as follows. They were all cases of carcinoma in the pelvis. They all received repeated anaesthetics with halothane, and the same premedication. All were treated with radium. In all the cases the liver edge was palpable in the acute phase. The first and second patients recovered with symptomatic treatment only, while the third responded dramatically to treatment with corticosteroids.

In view of these findings we wonder if it may be that the combination of radium and halothane is rather more likely to cause liver damage than the administration of halothane alone.

We would like to thank Mr. Blaikley, under whose care the three patients were treated, for permission to publish their case histories.

—We are etc.,

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