cancer were fewer than those of Professor Cooper and his colleagues but we included only selected cases. Patients with bacterial infection, confirmed by the nitroblue tetrazolium test,⁸ were excluded. That raised serum muramidase levels may in some cases of untreated cancer be due to local bacterial infection cannot be ruled out, particularly in colorectal cancer, which often infiltrates the superficial layer of the mucous membrane. This may explain why only some patients have raised serum muramidase levels.

The observation that bacterial infection is associated with raised serum muramidase levels prompted us to measure these in 40 patients, of whom 28 had a local and 12 a systemic infection. Some of the patients had cancer and others did not. The serum muramidase level was raised in all of the patients with systemic infections but in only five of the 28 with local infections. All of these five had cancer and their local infection was in tissue surrounding the neoplasm. The nitroblue tetrazolium test was positive in four out of the five.

Our findings lead us to believe that a raised serum muramidase level in some cancer patients is only a secondary phenomenon and is of no diagnostic or prognostic value.—We are, etc.,

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- 1 Hansen, N. E., *British Journal of Haematology*, 1973, 25, 771.
- 2 Hansen, N. E., Andersen, V., and Karle, H., *British Journal of Haematology*, 1973, 25, 485.
- 3 Hansen, N. E., et al., *Journal of Clinical Investigation*, 1972, 51, 1146.
- 4 Guerry, D., et al., *Journal of Clinical Investigation*, 1973, 52, 3220.
- 5 Szmitowski, S., et al., *Folia Haematologica*, 1974, 101, 935.
- 6 Litwack, G., *Proceedings of the Society for Experimental Biology and Medicine*, 1955, 89, 401.
- 7 Jollès, P., Sternberg, M., and Mathé, G., *Israel Journal of Medical Sciences*, 1965, 1, 445.
- 8 Park, B. H., Fikrig, S. M., and Smithwick, E. M., *Lancet*, 1968, 2, 532.

Hepatitis in Selective IgA Deficiency?

SIR,—The unique observation of Benbassat *et al.*¹ that hepatitis occurred in five out of 12 patients with selective deficiency of serum IgA led them to suggest that increased susceptibility to hepatitis may be due to the defect in their local and humoral immune mechanisms. Tests for hepatitis B surface antigen and antibodies (HBsAg and anti-HBs respectively) were not carried out on those five patients for establishing the differential diagnosis of hepatitis. Since Ogra² has demonstrated specific IgA antibodies to HBsAg in exocrine secretions, Benbassat *et al.* suggested that a defect in the normal protective action of IgA in the alimentary tract combined with the defect in humoral immunity could result in a tendency to infections by viruses, particularly when the portal of entry of the viruses is the gut.

Selective absence or deficiency of IgA has been a subject of particular interest to us since the first demonstration of serious anaphylactic transfusion reactions caused by class-specific anti-IgA.³ In further pursuit of this investigation Vyas *et al.*⁴ have formed a registry of healthy blood donors selectively lacking IgA (aIgA). A total of 83 aIgA donors and 30 donors with IgA deficiency were tested for HBsAg using solid-phase

radioimmunoassay (AUSTRIA™, Abbott) and for anti-HBs using hemagglutination assay.⁵ A control group of healthy age- and sex-matched donors with normal levels of IgA were concurrently investigated. None of the sera were positive for HBsAg; the incidence (3.8%) of anti-HBs was similar in the aIgA and IgA-deficient persons in comparison with the control group. These data lead us to believe that persons lacking IgA or deficient in IgA have no overt susceptibility to hepatitis B virus infection.—We are, etc.,

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- 1 Benbassat, J., Keren, L., and Zlotnic, A., *British Medical Journal*, 1973, 4, 762.
- 2 Ogra, P. L., *Journal of Immunology*, 1973, 110, 1197.
- 3 Vyas, G. N., Perkins, H. A., and Fudenberg, H. H., *Lancet*, 1968, 2, 312.
- 4 Vyas, G. N., et al., *Journal of Laboratory and Clinical Medicine*, 1975. In press.
- 5 Vyas, G. N., and Shulman, N. R., *Science*, 1970, 170, 332.

Ischaemic Heart Disease in Young Women

SIR,—Dr. F. M. Oliver (1 February, p. 267) has offered further information in support of his claim to have found hypertension in 34% of a group of young women suffering from ischaemic heart disease. He now tells us that in some of those whom he describes as hypertensive the clinical recognition was made after blood pressure measurement on more than a single occasion. Indeed, of those "with myocardial infarction" 28 out of 81 had a "diastolic blood pressure of 100 mm Hg or more recorded on three or more separate clinical examinations."

What we still do not know is how many of these patients were found to have been hypertensive before their infarction. Does the phrase "with myocardial infarction" mean that in all of them it was found retrospectively? It would seem so, to judge by Dr. Oliver's reply to my comments on the influence of ischaemic heart disease upon the electrocardiographic diagnosis of left ventricular hypertrophy, his only remaining index of hypertension since in his original paper (2 November 1974, p. 253) he says nothing of retinal or necropsy findings. He agrees that "previous myocardial infarction" virtually excludes the contribution that S-T and T-wave changes can make to the recognition of such hypertrophy while maintaining nonetheless that increases in the relevant S and R waves "showed" the condition in 23% of his infarction patients. No doubt all R waves so robust as to withstand anterior infarction deserve respect, but are not these values also of doubtful significance in the presence of a damaged and perhaps dilated myocardium?

Certainly, if Dr. Oliver found some of these women to have diastolic levels of 100 mm Hg on repeated examinations spread over weeks this would suggest that most of them had been mildly hypertensive before their infarction even though the recordings were made a year later. But an association between hypertension and angina cannot justify his inference that "hypertension is an important pre-infarction risk factor in young women." This is the view long nourished by

the Framingham studies. It derives, however, from a process of reasoning that equates symptoms with ischaemic heart disease regardless of morbid change. My own feeling is that there is better evidence to suggest that hypertension commonly provokes angina (and infarction rarely but rather more readily in women than men) in subjects whose coronary vessels have already been damaged by atheroma and moreover that it plays no more than a slight and occasional part in the genesis of that atheroma.—I am, etc.,

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Women Doctors in the N.H.S.

SIR,—The letter from Dr. Nancy K. Shrubshall (8 March, p. 573) is ungenerous to women doctors, and for a psychiatrist (and a woman) she shows some lack of perception. Of course her male colleagues treat her with absolute fairness, and it is right that they should do so since she is willing to work (and apparently to think) entirely on their terms. I wonder why she views her profession as a procrustean bed on which you can lie only if your limbs have been stretched or chopped to fit?

It is easy to sneer at women doctors for "gratifying their maternal instincts." Does she feel the same about men who gratify their political, sporting, artistic, or paternal instincts while practising medicine or are all male doctors actively engaged in saving life for 24 hours every day? A great many women doctors do manage to hold the balance between work and family without detriment to either—much more difficult and rewarding than "eating your cake and having it." But penal taxation and unfair discrimination in pensions and allowances are harder burdens to bear than unkind words.

If totalitarian and antifeminist attitudes were ever to return us all to the *Kinder, Küche, Kirche* world of the past, then even Dr. Shrubshall's freedom to practise as she wishes might be lost. It would be wiser surely to exhibit a little more tolerance and allow other women their freedom too.—I am, etc.,

MARY DUGUID

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SIR,—Dr. Nancy K. Shrubshall (8 March, p. 573) is apparently under the impression that enabling married women doctors to work is an act of charity, of no benefit to anyone except those fortunate ladies themselves.

After 10 years' hard work I am a reasonably well-informed efficient G.P. Whom does it benefit if I now give up for 16-20 years to bring up the children I regard as welcome members of the family, not optional extras? There is plenty of work to be done and plenty of willing employers with flexible timetables. I do not feel it unreasonable to expect some financial gain after paying basic essentials such as electricity bills, rates, etc. Fillet steaks, Dr. Shrubshall, have long ceased to be part of the family menu.—I am, etc.,

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