Now before it is too late something must be done. Further finance must be made available. Staff must not be sacked. One cannot take on and sack staff. A hospital is a community which depends for its smooth running on stability and continuity of staff, not a stop-go-stop situation linked to the financial vagaries of the Minister of Health. The Minister also denies a shortage of hospital medical staff and that large numbers of graduates are emigrating. This denial, of course, is just ridiculous, when in our region there are more than 55% non-British graduates occupying positions up to senior registrar grade. Surely these figures alone point to the absurdity of such a denial.

As a profession we must press for the Government to do all in its power to restore confidence between the medical and nursing professions and the N.H.S. administration before it is too late.—I am, etc.,

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Diabetes Mellitus and Pernicious Anaemia

SIR,—In their recent paper Professor L. J. Witts and his colleagues (January 19, p. 159) drew attention to the high incidence of pernicious anaemia in diabetes mellitus, and referred to our paper¹ describing 150 cases of diabetes mellitus in which no subnormal vitamin B₁₂ concentration was recorded. During this investigation, when we were particularly interested in a possible relation between the long-term complications of diabetes and vitamin B₁₂, we deliberately excluded all patients with other conditions known to affect the serum vitamin B₁₂ concentration. In fact one unsuspected case of pernicious anaemia was encountered but excluded from the series. The discussion of the significance of this case and of the association between diabetes and pernicious anaemia had to be omitted from our paper for editorial reasons.

Among the diabetic patients who have attended the Royal Free Hospital the incidence of pernicious anaemia is 6.7 per thousand and at Willesden General Hospital it is 3.4 per thousand (see Tables). Many of these diabetics are not now attending these hospitals for various reasons and it is possible that a small number may have developed anaemia since their last visit. The incidence of pernicious anaemia in these two groups of patients is higher than that for the general population, but appears to be lower than that (3 per 100) found by Professor Witts and his colleagues in Oxford. The differences between these various groups are presumably

	Total Number of Diabetics	Number with Pernicious Anaemia	Incidence per Thousand
Royal Free Hospital ..	1,650	11 (3 men)	6.7
Willesden General Hospital ..	864	3 (1 man)	3.5

	Diabetes Mellitus Diagnosed First	Pernicious Anaemia Diagnosed First	Diagnosed Together
Royal Free Hospital ..	4	5	2
Willesden General Hospital ..	0	1	2

	Number with Posi- tive Family Histories and Diabetes Mellitus	Number with Posi- tive Family Histories and Pernicious Anaemia
Royal Free Hospital ..	5	2
Willesden General Hospital ..	2	0

due to some sort of case selection, although geographical or racial factors might also be involved. Obtaining the true incidence will not be easy, especially as diabetes in the elderly is often symptomless and undiagnosed for many years. Illustrating this point was the case of a woman of 73 whose latent diabetes was only revealed by a glucose-tolerance test done at the time of diagnosis of the anaemia because of the association of the two diseases and because of her strong family history—three close relatives with pernicious anaemia and three with diabetes; one sister with pernicious anaemia but no known diabetes had a daughter with diabetes and as yet no known pernicious anaemia. Again emphasizing the importance of family history was the case of a woman with both diseases who had one brother with both and two brothers with just diabetes.

In the 14 patients—11 from the Royal Free and three from Willesden General—with both diseases, the pernicious anaemia came first in six cases, although in one the interval between the two diagnoses was only two years, so that the diabetes might well have been latent when the anaemia was recognized. In four patients the two diseases were diagnosed simultaneously. In only four cases did the anaemia follow the diabetes, in each after a long interval (13, 14, 15 and 20 years respectively); in these the specific diabetic vascular disease was not obviously present in all and there was no constant pattern of therapy; one was treated by diet alone, one had insulin in normal dosage, and the other two had a rather high dosage for long periods (80–100 units daily).

While we entirely agree that there appears to be an association between diabetes and pernicious anaemia, and that this requires further investigation, we should like to emphasize that there was no evidence in our series that subclinical deficiency of vitamin B₁₂ was particularly common in diabetics; in fact there were fewer cases with low normal serum vitamin B₁₂ concentrations (below 200 but above 150 $\mu\mu\text{g}$. per ml.) than in the 75 hospital control patients. This, in conjunction with the fact that pernicious anaemia frequently develops before the diabetes, suggests that the factors which lead to the development of pernicious anaemia are not operative in the majority of diabetics. Diabetic vascular disease would not appear to be responsible, neither would insulin therapy. It seems more likely that there is some genetic linkage between the two diseases.

A further point on which we should like to comment is that the mean serum vitamin B₁₂ concentration of the diabetic patients studied in the Oxford series was slightly higher than that of normal people but not significantly so, whereas in our series it was significantly higher, the mean being 673 $\mu\mu\text{g}$. per ml. as compared with a mean for hospital controls of 473 $\mu\mu\text{g}$. per ml. This difference is probably to be explained by the fact that ours was not a random selection and contained a fairly large proportion of patients with renal complications, in whom the serum B₁₂ concentration is frequently high, probably the result of impaired excretion of the vitamin. It would be interesting to know if Professor Witts and his colleagues also encountered high values in patients with renal lesions.—We are, etc.,

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REFERENCE

- ¹ Beckett, A. G., and Matthews, D. M., *Clin. Sci.*, 1962, 23, 361.