

was noted, although in some instances, some improvement did seem to occur.

*Side effects.* Three cases complained of the gradual development of general asthenia and were especially leg weary. The substitution of Tab. Pyridoxin 12.5 mg. mane nocteque for the pantothenic acid resulted in a rapid recovery. It seems possible that a vitamin imbalance may have been at fault in these cases.

*Discussion.* The possibility that osteoarthritis of the "worn joint" type may be due, in part at least, to a metabolic derangement in respect of pantothenic acid and/or of co-enzyme A, would seem to receive some support from the fact that (a) the occurrence of a simple primary deficiency of pantothenic acid is unlikely since an ample supply of the vitamin is available in the diet<sup>3</sup> and (b) the known symptoms and signs of pantothenic acid deficiency<sup>4, 5</sup> e.g., general asthenia, paraesthesia and the "burning foot" syndrome, are not normally encountered in severe osteoarthritis.

Dundee.

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### Animal Protein and Atherosclerosis—Sequelae

Sir,

1. *Antibiotics.* Evidence has already been related showing a close correlation between (a) the mortality from atherosclerosis and the consumption of heated animal protein<sup>1, 2</sup> and (b) between this same mortality and the intake of cyanocobalamin.<sup>2, 3</sup>

In this connection, it is well known<sup>4, 5</sup> that the exhibition of antibiotics, particularly penicillin and aureomycin, frequently causes an increased absorption of *freed* cyanocobalamin from the colon; in fact, penicillin has been used for this purpose in the treatment of nutritional pernicious anaemia.<sup>9</sup>

It is equally well known<sup>6, 7, 8</sup> that iodinated casein blocks the absorption of cyanocobalamin from the bowel. Therefore, since

it had been frequently noticed that patients, who had had a course of antibiotics, showed evidence of what appeared to be a "rebound" phenomenon—occurring in most cases *within* 2 to 3 weeks after the withdrawal of the antibiotic—a "rebound" phenomenon, which, usually but not always, affected the same system under treatment—it was decided that, whenever it was necessary to use antibiotics in this practise, iodine in the form of Lugol's solution— $\mu$  v mixed in  $\frac{1}{4}$  pint of fresh, unheated and unpasteurized milk, mane nocteque—should also be given. This treatment was usually maintained throughout the period when the antibiotic was being taken and for a further period of 7 days after the antibiotic had been withdrawn. So far, since this treatment was commenced, i.e., antibiotic plus Lugol's solution, no "rebound" phenomenon has been observed. Such treatment would, of course, be contra-indicated in the presence of both thyrotoxicosis and of myxoedema.

2. *Hypertension.* During the course of this investigation, it has also been observed on several occasions, that, if the patient was suffering from, or had a history of, hypertension, the exhibition of cyanocobalamin or of antibiotics, would appear to cause a significant rise in blood pressure, again occurring *within* 2 to 3 weeks after the end of the treatment. It was decided therefore, that all cases of hypertension, unless thyrotoxic or myxoedematous, should receive similar treatment, i.e., Lugol's solution,  $\mu$  v in fiesh, unpasteurized milk mane nocteque. So far in all cases so treated, this therapy has been effective in preventing the expected rise in blood pressure—a reversion in fact to the old treatment for this condition, popular during the first three decades of this century. On the other hand, in established cases of severe or malignant hypertension, Lugol's solution appeared to afford only symptomatic improvement, e.g., relief of headache, and no apparent significant fall in blood pressure resulted.

Duadee.

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