A NOTE ON THE CARDIAC SYMPTOMS OF PERNICIOUS ANAEMIA:

WITH PARTICULAR REFERENCE TO CARDIAC PAIN.*

BY

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THE following observations are based on notes of thirty-six consecutive sufferers from pernicious anaemia. In one of them, an elderly man, the picture was perhaps rather that of an aplastic anaemia; yet there was enough reason for looking on it as a haemolysis to which his bone marrow could not respond, to justify its inclusion in these notes. My present purpose is to call attention to two facts that have some clinical significance. The first of these, the simulation of cardiac disease by pernicious anaemia in its early stages, was forcibly impressed on my mind by an experience that I shall briefly relate.

About two years ago I was spending a week-end in the country; and, having need of a telephone, went in search of one at the village post office. It was a warm Sunday afternoon, and when I attacked the private house adjoining the post office, some time passed before my knocking brought out a stout, middle-aged woman, who was so scant of breath and so inclined to cyanosis that even on a June Sunday afternoon in Somersetshire I could not help speculating on the state of her myocardium. A few weeks later I was called to this same village by the doctor in whose practice it lay, to see a patient who proved—to my great interest—to be the lady of the post office. I was told that for some months she had been short of breath, and losing weight rather quickly; also that she had been troubled by polyuria. Her pallor was remarked on, but it made no great impression on me—partly, perhaps, because the room was darkened by a very heavy thunderstorm. Her pulse was 96 to the minute and regular; the blood pressure was 130 mm. Hg systolic and 70 diastolic; she seemed a trifle cyanosed. The heart was not obviously enlarged, and indeed the only local sign of disease was a loudish systolic murmur heard all over the front of the heart, but especially at the apex. Apart from a few râles at the bases nothing abnormal was found. She was in bed, and we decided to keep her there, with a provisional diagnosis of myocardial degeneration of senile type.

As the course of events proved, it was a severe anaemia that had depreciated the value of the cardiac muscle; and though its subsequent behaviour has not been exactly that of a pernicious anaemia the moral is the same: I ought to have examined the blood.

This is, however, not an isolated experience. In ten of my thirty-six cases the first diagnosis made was that of heart disease. Six of these patients were elderly, and their symptoms were of the kind that arise from the myocardial changes common at such ages: dyspnoea, oedema, and cardiac pain. In two, men of about 40, the rapid bounding pulse and basic murmurs had given rise to a suspicion of aortic valvular disease. In one other, to be alluded to later, there was in fact aortic disease as well as pernicious anaemia. Last of all, a woman of 40 was at first thought to be suffering from chronic ulcerative endocarditis, and indeed it may yet prove that she has this disease as well as the haemolytic anaemia that has been shown to exist.

My second point is this: that among the symptoms of myocardial disease sometimes exhibited by the patient with pernicious anaemia cardiac pain has a place; 8 of my 36 patients complained of it. In 2, attacks of substernal pain during exertion constituted the first evidence of ill health. In another patient, a woman of 56, two terribly severe attacks of precordial pain with collapse were observed during the last weeks of life, the second one being almost immediately fatal. There was no autopsy. A fourth complained of a heavy pain over the chest and shoulders, a fifth of a painful sense of constriction round the waist, and a sixth of a tearing, pressing pain in the centre of the chest and both arms; in all these it was brought on by exertion. Another, a woman of 63, had a brief attack of mid-sternal pain while we were examining her. It made her groan and lean forward with an anxious look. The case of the eighth patient, a man of 56, differed from the rest in that he had, from the first, quite definite physical signs of aortic disease in addition to the characteristic symptoms of pernicious anaemia. *Post mortem* this view of his case was confirmed; he had a diffuse atheroma of the aorta.

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It is possible that all my other examples of cardiac pain in pernicious anaemia are also to be referred to a coincident cardio-sclerosis. All the patients were of an age to which such an explanation might be applied, yet none of them showed any signs of cardiac disease, apart from this one man; and Reid's¹ recent inquiry into the heart of pernicious anaemia discovered a noteworthy absence of cardio-sclerotic changes. Moreover, Dr. Todd has shown me some electro-cardiograms which suggest that there are certain changes in the curve which are peculiar to severe anaemia. Finally, the incidence of cardiac pain in cardio-sclerosis with pernicious anaemia is higher than in cardio-sclerosis alone.

At all events, let me be content to record the fact to which I have only once seen any allusion elsewhere, in a paper by Herrick and Nuzum² written in 1918—that patients with pernicious anaemia sometimes experience cardiac pain.

REFERENCES.

¹ *Journ. Amer. Med. Assoc.*, 1923, ii, 534. ² *Ibid.*, 1918, i, 67.

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PROCEEDINGS OF SECTIONS.

SECTION OF PUBLIC HEALTH.

PHILIP BOOBYER, M.D., M.S., President.

DISCUSSION ON FOOD DEFICIENCY CONDITIONS IN RELATION TO PREVENTABLE ILLNESS.

OPENING PAPERS.

I.—STUART J. COWELL, M.B., B.CHIR.CANTAB.,
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THE SCIENTIFIC POINT OF VIEW.

THE past few years have witnessed an enormously increased interest in dietetic problems. Stimulated by the researches of scientific workers during the early part of this century into the nature of the foodstuffs necessary to maintain animals in health, and the consequent discovery of vitamins, men and women all over the world have been tackling problems of health and disease in man in the light of this new knowledge. The public at large has to a certain extent become acquainted with the more dramatic results of our dietetic investigators, and there is a real danger of its being led astray by the half-truths that are being served out to it by the lay press and by commercial advertisers. In these circumstances it is our duty to ascertain as far as we can the real facts concerning food deficiency in so far as they affect our own people, so that whatever practical measures we advocate for dealing with the situation may have the greatest chance of success. It is quite likely that a great deal more preventable illness results from defective diets than we recognize at present. Animal experiments and clinical observation have, however, yielded positive evidence of the relationship between dietetic deficiencies and certain common diseases met with in this country. I propose in this opening paper to limit myself to the discussion of these common diseases and the methods that may be used for their prevention.

We are not, of course, concerned here with food deficiency in the sense of diminution in the total quantity or energy value of a diet, nor do we intend to discuss at length the effect of alterations in the relative amounts of protein, fat, and carbohydrate contained in any particular diet. We know that the proportions of these food constituents can be varied very considerably in an adult's diet without producing signs of ill health. Moreover, some of us are beginning to realize that even the delicate alimentary canal and tissues of the infant need not be regarded as hypersensitive to slight alterations in the composition of