

tachycardia, shortness of breath on exertion, tightness of the chest, palpitation, giddiness, nervousness, tremors—all of these fall within that category which we all knew only too well during the war and labelled according to our predilections "D.A.H.," "Soldier's heart," "Effort syndrome," "Neuro-circulatory asthenia," or what not, and for the production of which innumerable causes were held responsible. But it would be outside my present purpose to indulge in speculation how far any one of the conditions inseparable from military service might be inculpated and how far they were pre-existing symptoms and merely unmasked during the war.

I am, Sir, yours faithfully,

ADOLPHE ABRAHAMS.

Harley-street, W., Oct. 21st, 1922.

PRIMARY PHLEGMONOUS ENTERITIS.

To the Editor of THE LANCET.

SIR,—May I suggest that the case described by Mr. E. E. Hughes in your issue of Oct. 21st under this title was really one of the so-called Henoch's purpura which is apt to simulate intestinal obstruction due to intussusception, and that the boy would have recovered without operation. The initial symptoms are consonant with such a diagnosis, and the subsequent occurrence of a blotchy rash on the forearms and legs and slight swelling of the knees is more than suggestive. Moreover, the previous history of pains in the elbows and knees and fever, leading to a diagnosis of acute rheumatism, before the onset of the visceral lesion, is of common occurrence in such cases. It is not stated that the rash was purpuric, but examination of the portion of the gut revealed numerous extensive hæmorrhages into the submucosa. As long ago as 1808 Willan described visceral lesions in purpura, including exudation into the wall of the stomach and intestines. It is regrettable that Mr. Hughes has not pointed out the special features, if any, distinguishing his case from Henoch's purpura. Superficial ulcers or extensive necrosis of the mucosa and submucosa may be present and purpuric spots in the skin may be absent. In addition, this type of case occurs in children.

I am, Sir yours faithfully,

EDMUND CAUTLEY.

Park-street, W., Oct. 23rd, 1922.

THE EFFECT OF POSITION IN THE FAMILY ON THE HEALTH OF THE CHILD.

To the Editor of THE LANCET.

SIR,—I should now like to reply to the correspondence following my article in THE LANCET of Oct. 7th on the above subject. Dr. N. Haire is very distressed that while I have investigated the incidence of disease I have omitted to consider the child mortality-rate. He suggests that the latter would have greatly modified my conclusions if not entirely reversed them, and forthwith proceeds in support of this contention to reproduce three tables of figures of which the first is the most definite in describing age, environment, &c. It is the table of infantile mortality-rates in a mining population and is associated with the name of Dr. Ploetz. Of course the whole point, if there is one, of Dr. Haire's criticism rests entirely on the assumption that these infantile mortality-rates are a true index of the health of the child according to position in family, even in the notoriously bad environment of the miner's home. He makes no attempt to justify such an assumption, which, as a matter of fact, is quite contrary to the conclusions of Dr. Ploetz, whose name he attaches to the table. To quote from Dr. Schuster, "Eugenics," p. 202.

"Dr. Ploetz expresses the opinion that excessive mortality among the later born is due largely to the fact that in a poor home where the family has become large the economic conditions grow worse and such children as are born receive less attention and care than when the family was smaller."

Dr. Haire should have, therefore, headed his criticism: "Some Tables Showing Infant Mortality-Rate among Later Born Children under the Conditions of Miners' Homes," which is quite a different proposition. He could then read up the recent extensive literature on the causes of infant mortality, especially in mining towns, and he would find that since Dr. Ploetz's conclusions in 1913 the words "economic conditions" would have to give place to "unhygienic and insanitary conditions." This statement is rather beautifully illustrated in the case of Colchester, where under Dr. W. F. Corfield the infantile mortality-rate for 1920 dropped to the extremely low rate of 44, in striking contrast with the rate for mining towns which is three times as great, although the average economic conditions for all Colchester families are probably not as good as those of miners. Infant mortality-rate is now well recognised as one of the best indices of the hygienic condition of a town and the latter is the real reason for the mortality differences here in this instance. It may also be added that this lowest Colchester infant death-rate happened to coincide with a sharp rise in the birth-rate, which is all very comforting to Malthusian susceptibilities but is what Dr. Haire has himself asked for.

To return to the original title of these communications; if Dr. Haire is still anxious to reverse the accumulating conclusions whose nature is indicated (for example) by Prof. Karl Pearson's classic "The Handicap of the Firstborn"; by the findings of two independent school medical officers (quoted in Birth Rate C. Report) that the healthiest children were the fifth and sixth respectively; and by the unanimous agreement with conclusions of the same kind which appeared in the London press in comments on my article, then I would suggest that it is desirable for him to first try to accurately establish the connexion between the matter under discussion and the figures which he reproduces in such interesting abundance.

I am, Sir, yours faithfully,

R. H. VERCOE.

Fellows-road, Hampstead, N.W., Oct. 21st, 1922.

THE ACTION OF RADIATION ON CANCER.

To the Editor of THE LANCET.

SIR,—In your leading article on the Culture of Tissues in Vitro you refer to the action of X rays and radium on cancer. I have been interested for many years in this subject and rejoice to read your remark—

"At present the conception of the mode of action of X rays and radium is entirely dominated by the idea that these radiations kill the cancer cell directly, and no importance is attached to the process by which the cancer cells—even those that have been killed—undergo absorption."

In the course of an introduction to a discussion in the Section of Electro-Therapeutics and Radiology at the annual meeting of the British Medical Association at Liverpool in 1912, I set out my experience that the character of the histological changes discovered in malignant tissues after radiation is to some extent uniform. On reviewing the changes observed in large numbers of sections of carcinomata and sarcomata which had been subjected to X rays, I found that they included round-celled inflammatory infiltration formation of fibrous tissue in varying amount and density, and necrosis of tumour cells. All these changes are seen repeatedly in tumours that have not been exposed to the action of X rays or radium, and I interpret them as due to reactive inflammatory processes on the part of the body tissues in their attempt to check and ultimately overcome the cells of the tumour. Malignant tumours undoubtedly diminish in size under the action of X rays and radium, but so they do without this treatment in a small number of cases. Why does the tumour decrease in size? Are the cells destroyed and absorbed, or is it due to the action of the contracting fibrous tissue? I think both these causes are at work. I would summarise the position thus: Nature in her attempts to check and destroy the invading cells of a malignant