

SIR,—Mr. Fenwick, in his paper on the treatment of cancer by potassium bichromate, mentions my name as having refused to treat a simple small rodent ulcer. This is absolutely incorrect.

Before making such a statement, Mr. Fenwick might easily have communicated with me; but that does not appear to be his idea of medical etiquette.

In the only other case of mine where to my knowledge his treatment has been tried, my first and only intimation that he was in attendance was a message brought by a son of the patient, saying, "Dr. Fenwick says you will not be wanted at our house any more, as he will look after mother."

Shortly I was again called in to soothe the last hours and sign the patient's death certificate.—I am, etc.,

T. FRANKISH, M.B.,

March 6th. Honorary Surgeon, Victoria Hospital, Accrington.

THE APPLICATION OF MENDELIAN CHARACTERS TO MAN.

SIR,—We have, I think, almost reached the limits of usefulness in this discussion, but it is desirable to sum up the stages of it, so that your readers may appreciate whether I have made a "surrender" or "gone off at a tangent."

1. In a public lecture given by Dr. Drinkwater a statement was made that Nettleship's nightblind pedigree was an illustration of Mendelism, and sensibly gave in the offspring of abnormals the required 50 per cent. of abnormals. There was no warning whatever that Dr. Drinkwater was calculating the offspring of abnormals in a hitherto unheard-of manner—namely, by omitting all those cases in which an abnormal chanced to have no abnormal children. Hundreds of returns have been made by the Mendelians, but not one before Dr. Drinkwater has adopted this remarkable method of calculation.

2. I pointed out in your columns that the hitherto accepted Mendelism showed that in the Nettleship pedigree there were 137 abnormals and 235 normals in the offspring of the abnormals (various other counts, ranging from 131 to 137, may be made, until several obscure points in the pedigree as at present constructed are cleared up, but such divergencies do not alter the matter). This is no approach to 50 per cent.; indeed, the odds against a deviation so large as this are more than 10,000,000 to 1.¹

3. Dr. Drinkwater wrote to the BRITISH MEDICAL JOURNAL explaining the manner in which he had calculated his percentages—namely, by omitting the offspring of all abnormals who had only normal offspring, and justifying it on the ground that he believes that dominance changes with the mating. He cited Ewart and Thomson as believing that it changed *in* the mating, not, apparently, because he held this view himself, but because it might confirm his view that it changed *with* the mating.

4. My reply was, and is still, that this change of dominance may be perfectly correct—or the reverse; but that:

(a) It is destructive of the first Mendelian principle of dominance;

(b) It renders the second Mendelian principle of segregation of small value, because the segregation will not take place in the recognized Mendelian principles.

(c) It would invalidate much Mendelian work which has included in calculating percentages the offspring of abnormals with only normal offspring.

(d) It renders Mendelism of no service to the medical profession, because it will be impossible to say until an abnormal has completed his family whether he is a true Mendelian abnormal or a Drinkwaterian spurious abnormal with a capacity for producing only normal offspring. Further, by a judicious change of mate, even if he had had abnormal offspring, he might improve matters, and have unaffected children!

Shortly, my contention is that Dr. Drinkwater's method of dealing with Nettleship's pedigree is destructive of Mendelism, which, whether correct or incorrect as a description of hereditary phenomena, is at least a logical whole. It is quite possible that a determinantal theory of alternative characters may eventually account for many such cases, and when this has been done the credit will lie largely with the movement dating from Mendel. But,

¹ Those who wish to study whether their observations are in accordance or not with theory will find the determination of such odds fully explained in Westergaard's *Grundzüge der Theorie der Statistik*.

until it is done, I for one shall continue to protest against the current tendency among what I shall venture to term the free lances of Mendelism—as distinct from the staff corps—to drag into popular lectures and magazine articles as illustrations of Mendelism cases which can only be termed Mendelian if a method of counting *ad hoc* be invented, or if odds, which only a tiro in the science of observation would overlook, be disregarded.—I am, etc.,

KARL PEARSON.

Biometric Laboratory, University College, March 7th.

ARTERIAL BLOOD-PRESSURE RECORDS BEFORE AND AFTER MUSCULAR EXERTION.

SIR,—Dr. Leonard G. J. Mackey criticizes the conclusion I arrive at in the JOURNAL of February 27th when I point to the "improbability that the heart in morbid conditions would be capable of overcoming pressures much greater than 160 to 170 mm. Hg" (Dr. Mackey, in quoting my words, has, I feel sure, unintentionally omitted the word "much"), assuming that this measurement is near the limit of reserve power of the normal heart.

I venture to think that the point which Dr. Mackey overlooks is that the question is one of reserve power. It is, I believe, generally admitted that the reserve power of a hypertrophied heart is less (and less in proportion to the degree of hypertrophy) than that of a normal heart.

Of course every one recognizes the fact that a heart in a case of long-continued high arterial blood pressure becomes hypertrophied, and overcomes greater pressures than the normal heart usually does.

My point is that it is reasonable to assume that such a hypertrophied heart, although working at a higher average pressure than the normal one, is, owing to the fact of its having less reserve power, unlikely to be capable of dealing with pressures much greater than the normal heart can when this is working at near the limit of its reserve power.—I am, etc.,

London, W., March 6th.

OLIVER K. WILLIAMSON.

PULMONARY TUBERCULOSIS IN CHILDREN.

SIR,—I am very glad to see that Dr. Fisher has drawn attention to the sweeping assertions of Dr. Mary Williams with regard to phthisis in school children.

After a large experience with children, I should be inclined to say that phthisis in school children is one of the rarest diseases. The conditions which are so often mistaken for phthisis are the non-tuberculous conditions of fibroid disease, often with some bronchiectatic dilatations.

The condition seems to arise chiefly from antecedent bronchitis from within and from pleurisy from without. I have frequently had typical cases of fibroid disease, with and without the cardiac displacement that so often accompanies it, brought to me as tuberculosis. I am inclined to think that if the majority of those inspecting children were asked how often they had seen fibroid disease in children the answer would be that it was practically non-existent, whereas I think that if reliable statistics could be obtained they would be found to vary very considerably from those of Dr. Williams.—I am, etc.,

March 8th.

ELWIN H. T. NASH.

RURAL NURSING ASSOCIATIONS.

SIR,—Among other subjects which are now calling for attention from the members of the Association is that of the local nursing associations which are rapidly being established throughout the country. Ostensibly introduced to assist the medical attendant, and to work under his directions in the interests of the sick poor, the nurse in many cases becomes a serious competitor for minor medical and surgical practice. The managing committee consists of a group of the usual well-meaning female busy-bodies, on which the local practitioner is often not in any way represented. A general canvass of the district is made, cases are sought for in all ranks of society, and touting is openly and avowedly practised. Not merely the poor, but the small farmers and tradesmen of the villages are entreated to employ the nurse and midwife, with the assurance that if anything goes wrong the doctor, who has always hitherto attended them, can be called in. In some cases I have been told the nurse makes a friendly call on nearly every case under medical treatment, the usual gossip