

dominant, the condition may also be inherited as a recessive trait.

Allen<sup>3</sup> affirms that heredity is more important than all other factors in the aetiology of arteriosclerosis. He points out on the one hand the individual with healthy forebears, from the cardiovascular point of view, who in spite of severe stresses and strains reaches old age with healthy arteries, and on the other hand the young patient with advanced arteriosclerosis, perhaps associated with diabetes, in whose case the only contributory factor is a poor eugenic background.

For several years I have collected pedigrees of patients with hypertensive disorders, and find in these strong confirmatory evidence for the hereditary causation of the circulatory diseases. One such pedigree, with detailed notes on individual members, I have recently published in the *Eugenics Review*.<sup>4</sup>

I feel most strongly with Dr. Goodall that the whole question of the inheritance of hypertensive disorders is of such immense importance that it merits detailed investigation by as many observers as possible, both in hospitals and in private practice, and the correlation of their findings by geneticists and statisticians.—I am, etc.,

Coningsby, Lincoln.

J. W. McFEETERS.

### Failure of Splenectomy in Purpura Haemorrhagica

SIR,—I hope your readers will not be unduly influenced by the levity, probably inadvertent, with which Prof. Witts in his paper on ulcers of the leg in purpura haemorrhagica (Sept. 12, p. 309) decides on removal of the spleen. As the platelets numbered only 19,000 and 20,000 respectively, "splenectomy was advised." In one case no benefit was obtained, and in the other an excellent recovery was made. In the later case it is too early to say that this is permanent, for a period of improvement in purpura haemorrhagica is often followed by the recurrence of the disease in all its aspects notwithstanding splenectomy.

It is now some 17 years (*Lancet*, 1925, 1, 323) since the late G. A. Sutherland and I introduced splenectomy into this island as a treatment for purpura haemorrhagica, and enough experience has been gained to state that splenectomy has a very limited role in the treatment of that condition. In my later experience splenectomy is only justified (1) in severe cases which fail to respond to dietetic and antitoxic measures designed to eradicate foci of infection, and (2) in fulminating cases where death is threatened from exsanguination by external haemorrhage. The temporary benefit seen after splenectomy would appear to be due to the removal of a depot or concentration in the spleen of the factor which has the faculty of increasing the permeability of the capillaries to the extravasation of erythrocytes which manifests itself as purpura and ecchymosis.

When splenectomy was first applied in purpura haemorrhagica it was thought that the condition was due to an essential thrombocytopenia, but further experience does not bear out this theory. Lack of circulating platelets is found in practically all conditions in which purpura is seen—e.g., the specific fevers, diphtheria, nephritis, etc. In these conditions a toxic effect on the capillary wall seems a reasonable pathological explanation, and the scantiness of the circulating platelets may be explained by the numbers immobilized in plugging the lesions in the capillaries. Where the primary condition is not recognized, an essential failure in platelet production is postulated in the term "essential thrombocytopenia," but this is no more than an expression of our ignorance, and there is no evidence whatsoever that it is a disease *sui generis*, as is implied by Prof. Witts in his introduction. Splenectomy does not remove the cause of the loss of circulating platelets except for a brief period in chronic cases. In mild cases I have had successful results by purely medical measures designed to raise the general standard of health.

The failure of splenectomy in purpura haemorrhagica is well illustrated in a post-operative history of some 17 years in all three cases in our original paper. Apart from a brief period of under two years immediately after the operation, during which clinical manifestations were scanty or absent, these patients could and can at any time be diagnosed as victims of purpura haemorrhagica (and of splenectomy). The female histories are almost identical with menorrhagia, metrorrhagia, epistaxis, purpura, and anaemia. During this period one has undergone an emergency abdominal operation for severe ovarian haemorrhage. (This has also occurred in another case under my care splenectomized at Bradford in 1928.) In recent months the third case in our original communication has given cause for great but unfounded anxiety. She reported herself as pregnant. Despite twenty years' history of haemorrhages and purpura she went to labour and gave birth to a fine boy with a

total loss of only 3 oz. of blood notwithstanding a platelet count of only 50,000 per c.mm. throughout the whole gestation. The baby was born with purpura on the tip of his nose and on the palate, and the platelet count was only 40,000 on the 14th day of life: since then no further purpura has occurred and the platelets are normal at 260,000 per c.mm.

I fear I have trespassed beyond the normal confines of a letter, but I think it is important to mitigate the mischief which might be caused when splenectomy is undertaken from a chair of medicine with no higher grounds stated than lack of platelets, a feature which the operation more often than not fails to alter in severe cases. I quite realize that Prof. Witts was experimenting in his two cases, but his reason for the operation is too baldly stated and too casual in its implication to pass unchallenged.—I am, etc.,

London, W.1.

BRUCE WILLIAMSON, M.D., F.R.C.P.

### Single-handed Anaesthesia and Operation

SIR,—Dr. W. Brian Gough (Sept. 5, p. 295) has raised the question of single-handed operating and anaesthetizing. In the present state of medical public opinion it is bad policy for a doctor to attempt both. Leaving policy on one side for the moment, and regarding merely the facts, we do find that when matters are suitably arranged the patient is his own best anaesthetist, requiring only that amount of help which any person capable of watching or hearing air bubbling through ether is competent to give. That means in practice anybody provided he is not both blind and deaf. It is a well-known fact, though much neglected, that the secret of safe anaesthesia is an open airway. The procedure then for the would-be combined operator and anaesthetist is as follows: (1) get the patient under; (2) introduce a tube into the trachea and fix it and connect up with the suitable apparatus.

It would be tedious to describe this suitable apparatus, but it may be said that it has the following advantages. It is very simple. It is inexpensive (£3 13s. 6d.). It is automatic in action. It is more accurate than the most skilled anaesthetist, for the dose is exactly regulated to the operative procedure by a mechanism that has been perfected over many millions of years—namely, the patient's own respiratory centre. It can be and is generally used with oxygen from a cylinder, but is quite independent of that oxygen. This is a very important point. If the definition of the anaesthetist which afforded a source of never-failing amusement to one of the greatest of living surgeons—namely, "that person who sits at the head of the table more than half asleep while the patient on the table is more than half awake"—has any measure of truth in it, and it has some, then the said anaesthetist may not notice—when the oxygen cylinder of a Boyle or a McKesson has run out. In such a case the oversight, even if short-lived, might be fatal. With the apparatus in question it wouldn't matter, for the patient would still be getting as much O<sub>2</sub> as the rest of us. If oxygen from a cylinder is being used, the lungs can be flooded with oxygen in two seconds by merely turning the tap of the oxygen cylinder—a manoeuvre which also stops the anaesthetic. By pinching the tube on the exhaust valve 16 times a minute oxygen pressure in the lungs can be varied as required without danger of rupturing the air vesicles. By immersing this same tube in water, pressure in a collapsed lung can be raised to any desired height. Anaesthesia with it is so simple, so safe, so automatic, that one anaesthetist provided with six watchers could quite easily superintend as many operations in a theatre arranged for that number. Ether, CHCl<sub>3</sub>, gas and O<sub>2</sub>, and CO<sub>2</sub> have been given by means of it.

After what I have said it might seem that here at last is the secret of immortality, but this is not so. The human heart, one of the most wonderful things in creation, wears out at last, and occasionally that moment comes when under the influence of an anaesthetic. The apparatus puts the patient in the best possible position to carry on a bit longer. It has one disadvantage—it does not anticipate the wishes of the surgeon but rapidly overtakes them.—I am, etc.,

Manchester.

E. FALKNER HILL.

### Bee Stings

SIR,—Dr. R. Drummond (Sept. 19, p. 352) need not be surprised. His desperate run may have saved his life, as it is possible that violent exercise after being stung is a prophylactic against anaphylaxis.

A recent personal experience suggests this explanation. On the hottest day of August this year I was attacked by bees near an apiary on Exmoor, and directly afterwards pushed

<sup>3</sup> *Nelson's Loose-Leaf Living Medicine*, 1924, 4, 531.

<sup>4</sup> *Eugen. Rev.*, 1941, 33, 73.