

had my plaster removed and put myself into a splint in the shape of a cross, which I wore for some weeks. It did not interfere with my work, except that cystoscopies were difficult as one could never get one's eye at the right angle. With a stiff neck ordinary surgery, both abdominal and ophthalmic, was perfectly easy, as one learnt to bend from the hips very quickly.

Never again shall I inflict on a patient a neck plaster if it is possible to fix him adequately with splints, which I believe to be the case if one pays sufficient attention to the details of their manufacture and fitting.—I am, etc.,

E. W. HAYWARD,

Rajputana, Nov. 22.

Principal Medical Officer, Jodhpur.

Adrenaline Treatment of Asthma

SIR,—Dr. Alexander Francis's experience regarding the removal of polypi in aspirin-sensitives (December 3, p. 1179) agrees with mine. The removal of bone in them is usually disastrous. These patients have in an unusual degree the capillary permeability characteristic of allergy. At operation their noses flood with blood and the field is hidden. But the polypi have to be removed. They should not be tackled, however, till the patient has had a course of general treatment for a month or two. This includes an organic compound of calcium plus vitamin D but minus milk. Such treatment has served me well with a retired Army officer, asthmatic and aspirin-sensitive. The polypi recurred until this treatment had time to act, and also until I used ionization with a zinc needle buried in any buds that threatened to develop into polypi. The patient has now neither asthma nor rhinorrhoea. He never needs adrenaline.

That raw milk is a fertile source of asthma I have found for forty years. But it is not generally known that, short of asthma, it may cause rhinorrhoea. Milk rhinorrhoea has become common since the institution of "school milk." That raw milk should be stopped before trying the removal of the stellate ganglia for persistent rhinorrhoeas—as has been recently done to a lad who persistently took milk—does not seem to dawn on the rhinologist, nor the need for stopping it in treating hay fever. Other vitamins than D are of course important, and it is possible that foods rich in vitamin K—cabbage, spinach, liver—may be specially helpful because of the importance of this vitamin in the formation of prothrombin.—I am, etc.,

Glasgow, Dec. 4.

JAMES ADAM.

SIR,—I would like to thank Dr. Alexander Francis (*Journal*, December 3, p. 1179) for his courteous reply to my letter and for giving full particulars regarding the patient under discussion. As a matter of fact, I entirely agree with him as to the inadvisability of indiscriminate removal of polypi, but have certain suggestions to offer in response to his request.

1. Careful analysis, as recommended by Maxwell, to determine the prime source of the attacks. Maxwell's classification is, incidentally, as follows: (a) an allergen (bacterial; non-bacterial; bacterial plus secondary non-bacterial; or non-bacterial plus infection or toxæmia); (b) nasal; (c) broncho-pulmonary; (d) alimentary; (e) endocrine; (f) psychological.

2. Nasal endoscopy by a competent rhinologist—to avoid missing a latent sinusitis. Sphenoidal and post-ethmoidal sinusitis frequently play a part in the production of allergic manifestations, and are almost invariably missed by the ordinary rhinoscopies. Suspicious findings demand suction lavage and bacteriological examination of the washings.

3. The protein metabolism may repay investigation. Lapage and Dzinich hold that the liberation of histamine is the deter-

mining factor in the allergic reaction, while the former points out that circulating amino-acids and other toxic bodies irritate the autonomic nervous system.

4. Maintenance of the proper balance of potassium and calcium in the tissues and perfect endocrine balance both affect the irritability of the parasympathetic, according to Fraenkel and Bray; therefore any abnormality found should be corrected.

5. Sunshine, ultra-violet light, x-ray therapy, and cold douching after hot baths increase the output of adrenaline, so helping to stabilize the autonomic nervous system; while nerve tonics such as zinc valerianate and liquor arsenicalis may be helpful.

6. Strict dietary control is advised by Jay to avoid over-loading metabolism or including "allergenic" constituents.

7. Auto-genous vaccines are of very limited use (Bray, Theodore Just, and Frederico Nitti).

8. The fact that cutaneous and mucosal sensitivities do not run parallel courses and the changeability of sensitivity from time to time and from place to place negative the value of cutaneous tests and render desensitization rather futile (Bray and Chandler Walker).

9. Small doses of codeine and the giving of a sedative linctus at night are respectively recommended by the same two authors.

10. Sclerosing submucosal injections benefit a number of cases provided there be special indications.

11. Cauterization of sensitive areas is not a very popular measure, though W. Howarth claims improvement in 50 per cent. of asthmatics.

12. Intramucosal autoserotherapy and intravenous peptone have their supporters.

13. Surgery, except for sinusitis when satisfactory results are to be expected, should be extremely conservative (Bray, van Leuwen, Gill Carey, Moll). A submucous septal resection may leave an irritable ethmoid, while hypertrophic masses and hyperplastic sinus disease should be left severely alone; tonsils should only be removed if definitely infected. Lastly, Chandler Walker, Bray, Lapage, and others all agree that good results follow the removal of septic foci in cases of asthmatic bronchitis.

I hope that some of these suggestions at least may recommend themselves to Dr. Francis, and that with their adoption considerable relief may be afforded the patient.—I am, etc.,

Bath, Dec. 6.

C. A. HUTCHINSON.

Cyclopropane and Pulmonary Atelectasis

SIR,—During recent years there has been much discussion concerning the causation of post-operative pulmonary complications. It has been suggested that certain anaesthetic mixtures, such as cyclopropane and oxygen, which contain an abnormally high proportion of oxygen may lead to atelectasis or even major pulmonary collapse, either at the time of operation or subsequently during the post-operative period of recovery. This is due to the fact that oxygen is absorbed from the pulmonary alveoli much more rapidly than atmospheric air. To what extent this statement is true it is difficult to assess, as there are so many other factors involved in post-operative pulmonary collapse. Heavy premedication, obstruction of the airway, post-operative mechanical difficulties in respiration, bronchial spasm due to reflex irritation set up by too high a concentration of ether or (in certain cases) an endotracheal tube, must all play their part, while the current practice of producing an artificial apnoea in order to facilitate the work of the surgeon would appear to be not without danger to the patient.

During the administration of cyclopropane anaesthesia the patient inhales a mixture of gases containing anything up to 90 per cent. of oxygen. After a long operation this over-oxygenation is liable to result in unpleasant

after-effects, such as headaches, nausea, and possibly even mental symptoms in some cases. Moreover, unless the anaesthetist is careful to lower the oxygen percentage by easy stages towards the end of a long operation, the patient may suffer extreme shock on suddenly being transferred from 90 per cent. oxygen to atmospheric air. In order to overcome these objections it is quite easy to administer cyclopropane with ordinary air.

A Y-piece is incorporated with the rubber tube leading to the oxygen flowmeter of a Boyle's apparatus, one limb being connected to the oxygen supply cylinder and the other to a double-bellows as used for Shipway's apparatus. By adjusting the tap on the oxygen flowmeter and squeezing the bellows a steady flow of air at the rate of 1 or more litres a minute may be maintained for any length of time. If desired, a special flowmeter calibrated for air may be fitted to the Boyle's apparatus. During the induction of anaesthesia the rebreathing bag should be about two-thirds filled with air before starting the cyclopropane. Oxygen can be dispensed with altogether, but in practice it is better to adjust the flow of oxygen at the rate of 200 or 300 c.cm. a minute, according to the metabolic requirements of the patient. Subsequent losses due to leakage should be made up with air by means of the double-bellows. Incidentally, by using this technique with the Waters's carbon dioxide absorber the air is delivered direct to the face-piece and thus is not contaminated by the contents of the rebreathing bag.

To prevent misunderstanding, I would like to emphasize that I do not claim any originality in administering cyclopropane with air. It seems reasonable, however, to suppose that the human respiratory system has been evolved expressly for the purpose of inhaling ordinary atmospheric air; whereas the modern tendency of anaesthesia seems to be directed to compelling the patient to inhale anything except this universal and convenient gas, thus contravening the laws of physics and physiology.—I am, etc.,

Newcastle-upon-Tyne, Dec. 5.

PHILIP AYRE.

Correct Footwear

SIR,—I am glad to see that at long last someone else has taken up the question of women's shoes and the results that occur from the unsuitable examples of footwear thrust on the female population, pandering to their vanity. I have been interested in the matter for some years from the public health point of view, and only at the end of October, just before I retired, I examined the heels of nearly 2,000 children in the schools of my district. I classified them into three grades of malformation, according to the extent to which the heels were worn and causing the stresses in the foot to become abnormal, and according to the degree of abnormality of the foot causing the heels to wear abnormally. I found a few of the children's heels were so bad that they were completely worn on the outer side, making an angle of 45 degrees, and I had to add two more categories, making five in all. The number of abnormal cases was very high, and for some so far unknown reason was much higher in the normal upper school than in the large central school for children of slightly lower mental attainments.

My attention was first drawn to this matter by watching the waitresses in large multiple tea-shops in London. Some of these in the late evening were to be seen hobbling about, tired out as the result of the pain produced by their footwear. In all these cases the heels were worn on one side, mostly the outer, and it was obvious that the constant abnormal strain was the *fons et origo mali*. One large multiple store that I approached considered making shoes of a standard pattern part of their employees'

uniform, but the girls refused to wear anything but a "court" shoe with a needlessly high heel. Vanity ruled the situation.

Anyone who looks at the heels of the crowds in the streets will be amazed at the number of bad heels there are, particularly among the poorer members of the community. I had the idea that much of this might be due to buying second-hand shoes or the handing down of shoes in the family, but the number of cases of this I found was far less than I expected. The psychological damage is often considerable, as the victim seems to think that everyone behind her is looking at her heels. She cannot get away from the fact as, in order to keep her feet decent, she has to buy many more pairs of shoes than her more fortunate sister. A point often overlooked is that these very high heels throw the body balance out completely, and produce stresses and strains far from the feet. When Dr. T. Marlin says (*Journal*, December 3, p. 1159) that "high heels seem to be necessary for about 90 per cent. of our womenfolk" he is merely stating that the necessity is dictated by vanity and nothing else. When I refer to high heels I do not mean the heel of 1½ inches of the "Cuban" type, but the 3-inch or so peg-top, which gives no support save to a perfectly normally balanced foot. Another contribution to the deformity of the shoes is dictated by the ignorant bootmaker, who puts rubber tips on the outer side of the heels of these unfortunates. What they want is support and not a yielding outer edge, which only hastens the deformity of the heel and with it the shoe. A man's shoe requires a double row of large flat-headed nails; a woman's heel smaller nails on the outer side and frequent repair. For the cheaper shoe the man can have a metal heel which can be easily replaced; the trouble is that they are not replaced early enough. Very high heels often deform not only the shoes but ultimately the feet by pushing the toes right forward and crowding them into the front of the shoes. Vanity, vanity, all is vanity!—I am, etc.,

ELWIN H. T. NASH,

Chelmsford, Essex, Dec. 5. President, Society of Medical Officers of Health.

The Blood Platelet

SIR,—Referring to your leading article on the blood platelet in the *Journal* of November 26 (p. 1090) it must seem an intrusion on the part of a general practitioner to offer any comment. But the article, with its record of an immense amount of investigation which has so far produced no definite conclusion, naturally makes any medical man wonder why this should be so, and whether it may not be that the formation of the blood platelets is to be sought and found in the blood plasma itself instead of in the bone-marrow, spleen, and lungs. There are myriads of protein particles in the blood plasma. Is it not likely that some change in their relations forms the platelets? And now there follows a letter (December 3, p. 1179) from Mr. J. E. R. McDonagh, who has for many years made a critical examination of the blood and plasma. His views appear to be rational and logical, and are supported by his experiments and research. It would be of interest to have them confirmed and accepted, so that the problem of the blood platelet might be concluded. Mr. McDonagh's studies throw a new light on the problems of medicine in all directions, to my mind, and he reads deeper into the fundamental nature of things than any other investigator does. Further light on the many questions involved would be welcome.—I am, etc.,

Glasgow, Dec. 7.

R. O. ADAMSON.