

less an authority than Kingsbury states that it is about twice as effective as corn oil. This means that the same reduction in cholesterol level may be expected from one ounce (28 ml.) of cod-liver oil, or two ounces (57 ml.) of corn oil.

As to cost, bought by the gallon (4.5 l.) (this is available to special order), one ounce of cod-liver oil, the daily requirement, would cost little over one penny, compared with fourpence for the corresponding amount of corn oil.

Admittedly, cod-liver oil is not suitable for use as a cooking oil, but the current product is refined enough to be acceptable to most palates, and there is also a special mint-flavoured presentation. Between layers of, say, orange juice, its flavour is barely noticed. It can, however, be used to good effect in the preparation of salad dressings and mayonnaise. As in the case of the corn oil you mention, so here—recipe suggestions are freely available.

It would seem, then, that on cost and potency cod-liver oil handsomely beats the other polyunsaturated oils you mention. And here I think one should add availability, should a large demand suddenly arise. Versatility in use is perhaps not quite as great—but only half the quantity is required, however you like to take your oil.—I am, etc.,

Birmingham 8.

KEITH E. JOLLES.

Dangerous Anaesthetic Device

SIR,—We would like to draw the attention of readers to a serious danger that exists when the "Manley" intermittent-positive-pressure respirator is used in conjunction with an anaesthetic machine fitted with the "Bosun" oxygen-warning device.

Drs. Hurter and Williams, of Orpington Hospital, Kent,¹ have already drawn attention to this, but we feel that not enough publicity has been given to so serious a matter.

We also have discovered that the use of the Manley ventilator renders the oxygen-warning whistle inoperative, presumably due to a build-up of pressure from the respirator back to the rotameter head during the expiratory phase. It appears that 3 lb. per sq. in. (0.21 kg. per sq. cm.) pressure is required for the efficient working of the "Bosun" whistle, and as there is a back pressure of 1½ lb. per sq. in. (0.11 kg. per sq. cm.) from the Manley ventilator during the expiratory phase this renders the "Bosun" inoperative. It may be that other intermittent-positive-pressure respirators operated by the pressure of anaesthetic gases will produce similar undesirable results, although on testing the "Barnet" respirator we did not find this to be so. Further investigation with a view to rectification of a potentially most hazardous situation is urgently required.

In view of the previous reliability of the "Bosun" device, and the reliance which anaesthetists may have adopted towards it, we hope you will give this letter maximum publicity.—We are, etc.,

J. FRASER-JONES.
A. VIVIAN JENKINS.
E. THOMAS.

East Birmingham Hospital,
Birmingham 9.

REFERENCE

- ¹ Hurter, D. G., and Williams, D., *Lancet*, 1964, 2, 480.

Paroxysmal Heart Block on Exertion

SIR,—The article by Drs. J. Gough and O. P. Galpin (23 May, p. 1359) and subsequent correspondence prompts me to report the following case:

A 75-year-old man was admitted to the German Hospital in September 1963 complaining of attacks of dizziness. These had been infrequent over a period of ten years, but were now occurring once a week. The attacks were of sudden onset and lasted a few minutes without loss of consciousness, and with rapid full recovery. He did not relate them to meals or exercise.

In 1931 a gastroenterostomy had been performed for pre-pyloric ulceration and he had subsequently developed an iron-deficiency anaemia. On examination his pulse was 48 per minute, with occasional irregularities, and the blood-pressure 220/105 mm. Hg. Other systems were normal to clinical examination.

Chest x-ray showed moderate cardiac enlargement. Electrocardiography showed a varying pattern: an initial tracing showed regular sinus rhythm at 68 per minute with a P-R interval of 0.10 sec.; later 2 to 1 heart-block with a P-R interval of 0.28 sec. was shown, and finally complete heart block with a ventricular rate of 48 per minute. His attacks of dizziness were assumed to be associated with changes in the degree of block of atri-ventricular conduction. Treatment with sympathomimetic amines was not effective and eventually with some reluctance, in view of his previous peptic ulceration, he was given steroids. With prednisolone 30 mg. daily there was clinical, symptomatic, and electrocardiographic improvement within one week, and the cardiac rhythm appeared to be stabilized (rate 68 per minute, regular), with apparently normal conduction (P-R interval 0.10 sec.). He was discharged taking 15 mg. of prednisolone daily.

Unfortunately, he developed dyspepsia, later shown to be due to a deep stomal ulcer, and despite instructions to the contrary stopped the prednisolone. He had no acute withdrawal symptoms, but within a month his "dizzy attacks" returned. The E.C.G. now showed 2:1 A-V block with a P-R interval of 0.28 sec. In view of the article by Drs. J. Gough and O. P. Galpin it was decided to assess the effect of exercise, and a series of electrocardiograms after effort was taken. This showed the induction of complete heart block with a ventricular rate of 42 per minute, reverting after three minutes to the situation previously described.

Sympathomimetic drugs now cause hesitancy of micturition in this patient, and the only therapeutic measure has been to instruct him consciously to avoid any form of effort. This has proved most effective and he has admitted no symptoms for three months. Should they recur, the effect of pronethalol will be assessed, as suggested by Dr. P. B. S. Fowler in his letter (20 June, p. 1636).

I am most grateful to Dr. Mills Hall for permission to report his case and for his helpful advice.

—I am, etc.,

German Hospital,
London E.8.

P. A. KNOWLSON.

Atheroma and Leg Pain

SIR,—We are grateful for Dr. E. W. Knox's suggestion (24 October, p. 1071) that the tenderness over the tibiae in our patient with sedentary leg-pain associated with atheroma of the femoral arteries (3 October, p. 863) might have resulted from thrombophlebitis. There was no question of the acute stage at examination, but if the patient was among the few who show tibial tenderness as a residual sign of thrombophlebitis we now have a *raison d'être* for an otherwise

perhaps inexplicable finding. On the other hand, there were in the history and examination no other indications of venous thrombosis, such as peripheral cyanosis or the selective adductor tenderness and induration of the calf muscles mentioned by Dr. Knox; there was, however, slight oedema of the ankles and shins, but this was possibly connected with an episode of congestive cardiac failure treated nine years before.

It might be supposed that the ischaemic pain in the legs on hip flexion was due to impediment of the venous return by the bending of partly occluded femoral veins rather than to obstruction of the calcified arteries. Against this view are the picture of arterial insufficiency as opposed to venous thrombosis (for example, there was local pallor, not cyanosis) and the principle of economy in hypothesis-making. Dr. Knox does not develop such an interpretation and we also prefer to keep for the present to the aetiology we suggested.

The confirmatory unilateral case cited by Mr. D. W. Short (31 October, p. 1138) differs from ours (seen in 1960) in several respects. Our patient's electrocardiogram showed no sign of an earlier potentially embologenic condition, and the history and records (including those of the admission for hypertension and congestive heart failure) did not describe an acute ischaemic incident affecting the legs. It is possible that in Mr. Short's case local extra-arterial changes following the recent embolectomy contributed to the progressive arterial obstruction as the hip was flexed, for the artery, though maybe somewhat narrowed from residual or subsequently formed thrombus, was apparently not grossly calcified, as were our patient's arteries. It is interesting that division of the inguinal ligament removed the untoward effects of hip flexion. Certainly the inguinal ligament, as well as the rigid structures behind the upper part of the femoral artery, may promote sharp angulation of the artery on flexion, but it is as yet impossible to be sure that the operation would relieve the ischaemia in a case such as ours.—We are, etc.,

N. DE M. RUDOLF.
H. A. W. FORBES.

Department of Communication,
University of Keele,
Keele, Staffs.

Conformity, Obedience, and Ethical Standards

SIR,—In a leading article some time ago, entitled "Cruelty to Order" (9 May, p. 1198), you emphasized the importance of Milgram's work at Yale, which showed by experiment how habits of social conformity and submission to authority can lead people, professional and non-professional, to act against the standards of ethical and moral conduct in which they have been brought up.

The important features of this work are, firstly, that the subjects of Milgram's experiment were normal professional and non-professional people, who acted against ethical standards under no threat of any kind to themselves, and, secondly, that neither Milgram's colleagues nor senior students believed that anything like such a percentage of people would act in this way.

During the last few years it has fallen to me to collect observations and data, documented against a normal background, which corroborate Milgram's findings on the effects of conformity and obedience on ethical standards.

The data I am collecting should, however, in addition provide significant findings in relation to the implications of the final paragraph of your leading article, in that they are showing the cumulative effects of this psychological mechanism, not only on the subjects themselves, but also on the attitude and actions of those to whose authority they submit.

You referred in your final paragraph to the out-of-the-ordinary effects of this psychological mechanism on those in positions of authority over others, such as its exploitation by unscrupulous leaders, or even its possible effect on the ethical behaviour of some devoted research workers. However, the observations I have collected so far appear clearly to point to the fact that normal people holding normal positions of authority over others can also be vulnerable, in that some can be cumulatively affected by their own gradual realization that they can anticipate with confidence the overall frequency, in those submitting to their authority, of the dominance of conformity and obedience over ethical standards.

It can be shown that, with this realization, there comes to be, in some people, no check on latent tendencies emerging, and a deterioration in their own moral, ethical, and even efficiency standards.

This is clearly a psychological mechanism of great significance, in all its aspects, in the analysis of behaviour patterns in the individual and the group, but is no less of professional concern in the pertinence it has to the study of medical professional organization at the present time, when in many countries considerable changes are being sought from many sides in intra-professional relations and relations between profession and Governmental authority.—I am, etc.,

Adelaide,
South Australia.

S. GILLIS.

Trap for Saliva

SIR,—The distress of those condemned by disease and its cure to the repeated mopping

up of some or all of their litre and a half of saliva daily is only too obvious.

An extreme case is illustrated below of a 50-year-old man, transferred to the Wessex Centre for Plastic and Maxillo-Facial Surgery on 30 September 1963. He had had an excision of jaw, tongue, pharynx, larynx, trachea, and oesophagus to the level of the manubrio-sternal notch, and bilateral block dissection of neck, for poorly differentiated carcinoma of the skin of his chin. To the loss of his voice, the pain of his slowly healing neck, and the disablement of his swollen eyelids was added the full-time disposal of the secretion from his parotid glands and the mucus from his palatal glands. Swabs of sponge strapped lightly beneath the upper jaw provided temporary relief but required repeated changing. An acrylic prosthesis was planned, but his skin was too sensitive to allow contact, and in any case the changing shape of face and neck in turning the head would have destroyed any semblance of a watertight fit.

An Oxygenaire mask (Fig. 1a and Fig. 1b) provided a satisfactory answer, as shown above, catching secretions from both parotid ducts and the particularly viscid secretions which ran down the oedematous uvula. This kept him dry by day and, as he habitually slept half sitting, at night as well.

The "oxygen" inlet was connected to a Ryle tube, and the Ryle tube was passed down the oesophagostomy. Kinking of the bag, however, often prevented this from making a satisfactory drain, and shortening the bag made it a less efficient trap. Perhaps as he was on liquid diet the patient was in fact right in tipping saliva away when its weight caused the elastic to pull on his ears. At any rate he gained over 2 st. (12.7 kg.) in weight in one month.

One suspects that he did not wear the pink canvas façade (Fig. 2) often after obliging with it for his photograph, but at least he could write, "I can get dressed now without getting in a mess."

This method assumes that patients are sufficiently distressed by repeatedly having to mop up their saliva to put up with an unsightly bag. Our patient continued to wear the bag for 9 months until the appearance of pulmonary metastases disposed of any prospect of plastic reconstructive surgery. Stenson's ducts were then ligated and this made the patient dry and comfortable.

My thanks are due to Mr. J. N. Barron, F.R.C.S., for permission to publish this case, and to Mr. R. Conroy for the photographs.

—I am, etc.,

Stoke Mandeville Hospital, Aylesbury, Bucks. R. W. FIGOTT.

Emetine in Severe Septic States

SIR,—In a recent Preliminary Communication (13 June, p. 1550) Dr. P. Synek and Dr. V. Synek recently described the results they obtained with emetine hydrochloride in ten patients with severe infections which had not improved after previous treatment with antibiotics. These authors referred to a recommendation by me in 1958,¹ but in fact I started investigations with this drug many years ago. My first communication appeared as early as 1943,² while my conclusions were summarized in a monograph in 1954.³

I have found that the following infectious conditions respond particularly well to emetine therapy: purulent peritonitis of various origin, suppurative kidney infections, severe cholecystitis and cholangitis, acute pancreatitis, gas gangrene, as well as the so-called malignant furuncle of the lip (carbuncle). More than 30 cases of this type, including some severely ill patients with repeated rigors, were all cured with emetine alone. I doubt that another mode of therapy would have been as successful.

Furthermore, there is some evidence that emetine also has a favourable action on virus infections. Goldmann⁴ reported encouraging results in patients with ophthalmic herpes zoster. I myself have obtained rapid improvement in cases of hepatitis which judging from their clinical aspect could only have been of viral origin. Since it is often supposed that the aetiology of leukaemia could be viral, a trial with emetine in acute cases would certainly appear to be justified.

Of course it would be a mistake to suggest that emetine should always be considered an effective drug in all septic bacterial infections. Nevertheless, there is no doubt the drug undoubtedly offers good chances of recovery even when antibiotics and/or surgery have been ineffective. Moreover, any favourable response to emetine is usually very rapid—often within 24 hours. Even when such a spectacular response is obtained, however, emetine therapy must be continued for 8 to 10 days, since otherwise a recrudescence of the infection may occur. This suggests that the mode of action of emetine may be of an antitoxic nature rather than antibacterial. On the other hand, if marked improvement is not obtained within three to four days it is generally useless to continue this therapy.—I am, etc.,

Jugenheim, West Germany. E. MELCHIOR.

REFERENCES

- 1 Melchior, E., *Ars Med. (Liestal)*, 1958, 48, 548.
- 2 ——— *Schweiz. med. Wschr.*, 1943, 73, 385.
- 3 ——— "Emetin, seine Wirksamkeit auf schwere chirurgische Infekte," 1954, Ferd. Enke Verlag, Stuttgart.
- 4 Goldmann, H., *Ars Med. (Liestal)*, 1958, 48, 55.

Factors in Hypertension

SIR,—Systemic arterial hypertension may sometimes be secondary to renal or adrenal disease and be a potentially reversible process. I was therefore surprised that in the Clinicopathological Conference (10 October, p. 923) the role of the kidney in the pathogenesis of the hypertension was considered with complete exclusion of the associated adrenal disease.

The problem of incriminating renal artery stenosis as the prime factor was stressed, however, and the investigative findings cer-



FIG. 1a

FIG. 1b

FIG. 2