treated disks. A collar or traction do not achieve this.

The range of extension can be increased by means of a relaxed extension lying on a block under the upper dorsal region. The active extension must be carried out lying supine, and arching up to lie on back of head and buttocks. Carried out in this way the spine is not weight-bearing. It must be done as a stretch, not as physical jerks.

This treatment has been carried out for a good many years in the hospitals I visit, with gratifying results.—I am, etc.,

Tunbridge Wells,
Kent.

W. H. GERVIS.

Post-mortem Bacteriology

SIR,—We were interested to read the report by the Public Health Laboratory Service Working Party on the findings of their survey of post-mortem bacteriology (5 February, p. 313). Since November last we have made it a practice to take swabs from both bronchi at necropsy. These are examined by direct culture on chocolate agar and especially for staphylococci by culture on salt meat broth and subsequent plating on nutrient agar. While our cases do not as yet number as many as in the survey, we feel that some of our data may be of interest, especially as all cases coming to necropsy in our department are included. Subjects are drawn from two general hospitals, having together about 400 acute beds, and a mental hospital of nearly 2,000 beds. A number of cases are also drawn directly from the surrounding areas by arrangement with general practitioners or at the request of H.M. Coroner.

In the 200 cases examined up to the end of January the organisms isolated are as follows:

	No. of Strains Recovered	Per- centage
<i>Staphylococcus pyogenes</i> (coagulase-positive) ..	74	37
<i>Proteus</i> strains ..	21	10.5
<i>Haemophilus influenzae</i> ..	11	5.5
<i>Coliform bacilli</i> ..	36	18
<i>Mycobacterium tuberculosis</i> ..	3	1.5

As the above figures show we have found a higher incidence of bronchial colonization by staphylococci than that reported by the working party (37% of all our cases compared with 26%). We, too, have noted a very much higher incidence when hospital cases are compared with those from outside. In our series staphylococci were isolated in 63 of 135 hospital cases, an incidence of 47%, but in only 11 of 65 cases from outside, an incidence of 17%.

A second feature of our observations so far is the fact that though the methods in use have not been changed we did not recover any strain of *H. influenzae* until mid-December, within a few days of the onset of the thaw after the heavy snowfall in late November. Since then this organism has been regularly recovered and on several occasions in pure culture.

This survey, which includes histological examination of the lungs in each case, is being continued for a longer period and the

results will subsequently be recorded in detail.—We are, etc.,

General Hospital,
Sedgefield,
Stockton-on-Tees.

A. J. WORT.
E. W. WALTON.

Abdominal Pain in Liver Disease

SIR,—In your leading article (12 February, p. 375) it is stated that "liver disease is not usually regarded as painful." I believe that abdominal pain particularly in acute liver disease is much commoner than is made out in the leader. I would therefore like to take the opportunity of mentioning some of the conditions of the liver that frequently produce abdominal pain.

By far the commonest condition that produces intense abdominal pain is amoebic liver abscess. Abdominal pain is one of the commonest presenting symptoms of amoebic liver abscess and is perhaps the commonest cause of right upper quadrant pain in an endemic area. "Amoebiasis is equalled only by primary carcinoma as a cause of painful enlargement of the liver in African patients." Hepatic necrosis following the intake of herbal medicines not uncommonly produces abdominal pain. No doubt other forms of "toxic hepatitis" may also have this symptom. Pain is common in metastatic carcinoma of the liver without invoking rupture of a nodule.

Hepatic artery occlusion may present with a sudden onset of pain in the right upper quadrant. Pain is an outstanding feature of acute pyogenic suppuration of the liver and ascending cholangitis. Hydatid disease of the liver may produce a dull ache. Hepatic vein occlusion, aneurysm of the hepatic artery, Weil's disease, and liver flukes are often associated with abdominal pain. Myocarditis and pericarditis may produce such intense abdominal pain as a result of liver engorgement that attention may be directed to the liver rather than the heart.—I am, etc.,

Ashford Hospital,
Middlesex.

V. K. G. PILLAY.

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Intrauterine Contraceptive Devices

SIR,—In the follow-up of patients after the insertion of an intrauterine contraceptive device it is surely important to see the patient one week after insertion to reassure the patient, and to make sure it is in every way tolerable to her. The next examination is advisable one month later because a period will have occurred in the meantime, and if it is unusually heavy or there is any evidence of infection treatment can be undertaken. Subsequent examinations are advisable at three-monthly intervals if we are to learn as much as possible about these devices.

Lastly, it would reassure the patient, and add to continuity of experience for the doctor, if all supervision were undertaken by one practitioner instead of the patient being referred to another person for follow-up.—I am, etc.,

London W.1.

STANLEY A. BOND.

Maladjusted Children

SIR,—Your leader on maladjusted children (19 February, p. 440) mentions Lord Kilbrandon's plan for a director of social education who would function under the control of the local education authority. Such a post, it is true, would give focus and co-ordination to the rather haphazard services of welfare, education, and medical care that exist at present. But could we not be more far-seeing?

The post carries the rank of deputy director of education, and may not attract candidates with the requisite qualifications. In addition, the person appointed will find himself in the toils of local government, competing for finance against the claims of street-lighting and sewage-disposal.

Surely here is the need for a national body with access to central funds, and here is the opportunity to attract talented and ambitious men and women into a challenging field of social service.

The Kilbrandon Report has been keenly criticized in Scotland; but few can doubt the tremendous opportunities it offers for a rational approach to the treatment of delinquency. And not only in juveniles. As Lord Kilbrandon has himself suggested, it may presage a breakthrough of new principles into the treatment of adult offenders. Yet plans must be not only well laid but also well directed—"for if the trumpet give an uncertain sound, who shall prepare himself to the battle?"—I am, etc.,

J. K. W. MORRICE.

Dingleton Hospital,
Melrose, Roxburghshire.

Modification of the Two-way Gastrostomy Tube for Vagotomy and Pyloroplasty

SIR,—The two-way tube illustrated (Fig. 1) is a modification of the original two-way tube (Fig. 2) which has been described by myself and others in the past.¹⁻⁴

The double lumen tube was originally a naso-gastric tube. One element was used for aspirating the stomach after partial gastrectomy or vagotomy and pyloroplasty, and the other smaller tube was used for administering an intra-alimentary drip. Recently the double lumen tube has become popular as a gastrostomy tube, its use being exactly the same as for the naso-gastric tube.

The modification consists of a white flange running the whole length of the tube between the suction tube and the feeding tube (Fig. 1). This allows the surgeon to site the position of the double tube exactly where he wants it to lie inside the stomach. If a pyloroplasty is to be performed a small opening is made in the body of the stomach, the two-way tube is introduced, and the feeding element is led through the pylorus. In the case of a gastro-enterostomy the feeding tube is introduced into the efferent loop of the anastomosis. A small stitch of plain 000 catgut is drawn through the flange of the tube and fixed to the gastrostomy opening.

Previously when using the naso-gastric two-way as a gastrostomy tube one had to look carefully to make sure that all the aspirating holes in the suction tube were inside the stomach, and that the last proximal hole had not slipped outside the gastrostomy opening: the flange and the broad white line obviate these difficulties. After the tube is satisfactorily

in position the gastrostomy opening is covered by a sero-muscular tunnel of the stomach wall. Following this a small portion of the greater omentum is fixed over the tube as an extra precaution against any leakage.

FIG. 1

FIG. 2

This two-way gastrostomy tube has several advantages over the original naso-gastric two-way tube. In the first place the convalescence of the patient is without any doubt smoother. He can move about more freely in bed; in fact I make it a rule to have the patient out of bed the next day after his operation, and he is given a cup of tea to drink—this, of course, being aspirated immediately after he has drunk it. But the psychological effect of this on the patient is tremendous. Again, this two-way gastrostomy tube allows the patient to cough freely and to breathe more easily, thus diminishing the risk of lung collapse or lung infection. In addition there is no risk, however remote, of the patient developing a stricture of the oesophagus from the use of a naso-gastric tube.

To sum up, therefore, the advantages of the new gastrostomy two-way tube are as follows: (1) A flange has been introduced between the aspirating tube and the feeding tube. This flange allows the surgeon to fix the tube inside the stomach at exactly the right position he needs the tube to be sited. (2) A broad band is marked on the tube, so making absolutely sure that all the aspirating holes are inside the cavity of the stomach. (3) The flange is fixed to the skin by a silk stitch at the end of the operation, so doing away with a stitch encircling the tube, which was the method previously used; this was often too tightly secured, thus obstructing the tube.—I am, etc.,

London W.1.

MAURICE LEE.

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Surgery for Mental Illness

SIR,—I am most appreciative of the fact that the operation of stereotactic tractotomy should have been mentioned in your leading article (5 February, p. 310). Operative treatment, however, can never be considered in isolation but only as part of the work of a co-ordinated team. Psychiatric skill in the selection of material and in the prolonged and careful post-operative rehabilitation, which is so vital to success, materially affects the results obtained in any surgical series, and I regard the result claimed as being primarily due to these factors with the accuracy of operation as an ancillary feature.

The surgical task has been to provide a safe and undamaging procedure which can be used with confidence when required. The results observed by my psychiatric colleagues and myself tend to suggest that this operation affects as good a site as can be determined at present. The time has certainly come for a prospective study of this method in order to confirm this apparent surgical effect.

Since 1964 I have been seeking facilities for this purpose. Plans and costs have been determined for a small unit with special operating theatre, which could provide for the treatment of three cases a week, with the co-operation of a highly experienced psychiatrist. This would provide for the improved treatment of many patients at present dealt with by undercutting, and afford material for co-ordinated research by suitably appointed research workers. This should cover not only a prospective study but also investigation of the effect of operation on drug addiction and previous failed leucotomies, as mentioned by Dr. Tredgold and Dr. Sargent following the recent Maudsley Bequest Lecture. Only money is lacking. The capital cost of £19,000 and maintenance of £7,000 a year seems small in relation to the £140m. a year spent on psychiatric treatment, yet so far nothing can be obtained from National Health funds.—I am, etc.,

London W.1.

GEOFFREY KNIGHT.

Diets for Peptic Ulcer

SIR,—Dr. S. L. Malhotra (29 January, p. 295) states that peptic ulcer is rare in populations consuming "masticatory" diets, rich in cellulose and vegetable fibres, but that "the reason for this is not clear." May I suggest that the reason may, in fact, be quite clear? In my book on peptic ulcer¹ I have tried to show that these fibrous foods, which essentially comprise the unrefined carbohydrates, preserve their protein component intact—and protein is the only food material that buffers the gastric acid.

In this work I produce racial evidence that, both in peace and war, the lines of incidence of peptic ulcer accurately follow throughout the world (and nowhere more so than in the ulcer belt of India itself) the consumption of refined protein-stripped carbohydrates, such as white flour, polished rice, tapioca, and ordinary sugar.

Dr. Malhotra emphasizes the importance of fibrous foods in causing a large flow of saliva. I have myself pointed out this salivary factor with the greatest care, but it is not considered to approach in importance the protein one, which latter can be easily measured. For this reason

the diet set out in my book, stemming from the evolutionary and racial evidence presented, in no sense shuns milk, which, though causing only a minimal flow of saliva, is rich in protein and of long-established value in the treatment of peptic ulcer. The diet does avoid like the plague the soft refined carbohydrates that so often accompany milk. As the result of including unrefined grain and other unrefined carbohydrates, this coarse diet is in sharp contrast with the sloppy foods so often prescribed for ulcer cases.

It is emphasized in a special chapter that meals should seldom be numerous throughout the day, since this is rarely in conformity with the instinct of appetite. Indeed, it is advanced that the following of natural instincts on natural foods not only holds the secret of the correct diet in peptic ulceration but also that this principle clarifies and simplifies the whole subject.

This subject is carried further in a joint work just published.² In this work we show that with the change in diet in the 250,000 Indians now living in Natal the chronic fibrous ulcer characteristic of India changes to one where acute perforations are prominent.—I am, etc.,

Fareham, Hants.

T. L. CLEAVE.

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² — and Campbell, G. D., *Diabetes, Coronary Thrombosis, and the Saccharine Disease*, 1966. Bristol.

Unclassified Mycobacteria

SIR,—Your leading article on "An Unusual Mycobacterium" (6 November, p. 1080) contains no reference to the Florida experiences with this member of Runyons' Group IV of unclassified mycobacteria which were reported in 1962.¹ It was then reported that 70% of the 46 rapid growers isolated in 1959 proved to be *M. fortuitum*.

Since that date the isolation of unclassified mycobacteria in Florida has become reportable to the central register. In addition, the adoption by the state laboratories of a two-hour exposure to zephiran tri-sodium phosphate for sputum digestion has resulted in a small increase in the number of isolations of *M. tuberculosis* and *M. kansasii*, and a great increase in the numbers of the other groups of unclassified mycobacteria. With this technique 95% of positive smears grow out cultures, and there has been a marked increase in the isolations of *Nocardia asteroides*.

All isolates are subject to the niacin test to differentiate from *M. tuberculosis*.

In 1963, 513 new cases were added to the register, of which 72 excreted rapid growers. In 1964, 860 new cases were added, 141 being rapid growers. In 1965, 1,614 new cases were added, 237 being rapid growers. The correlation of these findings with the clinical picture, if any, is of course an important aspect of our research programme. Here it must suffice to say that *M. fortuitum* has occasionally been the only pathogen isolated in some cases of advancing pulmonary disease, but more commonly is isolated from abscesses, skin lesions, and occasionally draining sinuses.

This, then, is a very different pathogen from *M. kansasii*, Group I, or many strains of non-photochromogens, Group III. Even Group II scotochromogens have occasionally been related to steadily advancing pulmonary