midline. This included one case seen two hours after attendance at hospital where the patient was given ampicillin and paracetamol.

Detorsion relieves the pain immediately and dramatically and the testis descends in the scrotum with immediate relief to the patient. Analgesics may not be needed to do this.

This does not of course reduce the need for operation on both sides, since recurrence is likely, but it does make operation less urgent, and may be a useful practical procedure while awaiting anaesthesia or make the operation an elective one.—I am, etc.,

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Herpes Hepatitis

SIR,—In the case of herpetic hepatitis in a pregnant woman (26 April, p. 204) products of conception were examined. Unfortunately by the time they were available maceration was so far advanced that no evidence of infection could be established histologically. Attempts to isolate virus from the foetus were unsuccessful.

This was not surprising; the half-life of herpes simplex virus at 37° C. is only three hours.[1]—I am, etc.,

T. H. FLEWETT.

Regional Virus Laboratory,
East Birmingham Hospital,
Birmingham 9.

REFERENCE

[1] Farnham, A. E., and Newton, A. A., *Virology*, 1959, 7, 449.

Tracheostomy

SIR,—The two letters on the subject of tracheostomy (19 April, p. 185) refer to the possible role of cuff pressure in producing tracheal damage. There is an often unrecognized danger in the current method of reinflating tracheostomy tube cuffs with a predetermined volume of air. When a syringe is used for inflating the cuff much of the travel of the plunger is taken up in compression of the contained air. If a Portex polivinyl tube cuff is inflated with 5 ml. of air from a syringe which contained 20 ml. initially, the pressure in the cuff will be about 100 mm. Hg; if 5 ml. is delivered from a syringe which contained only 5 ml. initially, the pressure is likely to be about 250–300 mm. Hg. If the initial volume in the syringe is not described it is possible for gross overinflation of the cuff to occur if a smaller initial volume is used during reinflation of the cuff. This is dangerous, as it can be shown that the pressure applied to the tracheal wall increases rapidly as the cuff is inflated beyond the point at which the trachea is first completely sealed.

There is a strong case for inflating cuffs to a predetermined pressure, particularly where deflation and reinflation is part of the routine management of tracheostomies. This can be done simply and cheaply using any aneroid pressure gauge, such as an aneroid sphygmomanometer, connected to the inflating syringe through a Y-piece. The point at which a satisfactory seal occurs can be found by auscultating over the larynx while inflating the lungs.

I would agree that tracheal stenosis following the use of cuffed tracheostomy tubes has become more common. Analysis of the complications occurring in a group of 320 consecutive tracheostomies done during the last five years showed an incidence of tracheal stenosis of 4·3% among the survivors. However cuff pressure is not the only factor, and tissue reaction to the material used must be remembered when looking for alternatives.—I am, etc.,

FRANCIS PIGOTT.

St. Thomas's Hospital,
London S.E.1.

SIR,—I was rather surprised to read the letter by Drs. R. G. Bannister and R. A. Beaver (19 April, p. 185) on the use of plastic cuffed tracheostomy tubes.

I wish to clarify that the Portex endotracheal and tracheostomy tubes conform to U.S.P. XVIII page 905 (modified) implantation test. The Portex plastic tracheostomy tube has been available throughout the world for over five years, during which time a considerable amount has been written on the advantages of polyvinyl chloride versus rubber. The incidents of tracheostomy complications at the National Hospital are, of course, disturbing, but many will question the statement that the Portex tube is a hard material. It is important that the polyvinyl chloride cuffs should not be over-inflated, since this will indeed bring about a hardening situation and defeats the object of using a pliable material which will soften at body temperature and mould to the mucosal surfaces.—I am, etc.,

D. S. ALLEN,
Product Manager,
Portex, Ltd.

Hythe, Kent.

SIR,—The letter from Drs. R. G. Bannister and R. A. Beaver (19 April, p. 185), suggesting that the use of tracheostomy tubes made of rubber may be followed by few of the severe late complications of tracheostomy, agrees with an impression that was gained during a recent survey of more than one thousand tracheostomies in patients admitted to the United Oxford Hospitals.[1] When tracheostomy was done in any unit but one in Oxford, the patients who required a cuffed tube were normally cannulated with modern red rubber tubes of the Radcliffe pattern[2] (which incidentally are readily available), and so far there have been no tracheal stenoses at the level of the cuff or the tip of the tube in this group. Polyvinyl chloride tracheostomy tubes have been employed routinely for about six years in one unit where the operation is carried out about ten times each year. Among these patients there have been two tracheal stenoses, both involving the stoma and the trachea between the stoma and the carina.

The comparative scarcity of late structural complications which was observed in this series after sometimes very prolonged (several years') intubation with Radcliffe red rubber tubes can perhaps be attributed partly to the inertness of the constituent material, partly to the shape of the tube, which allows it to sit securely in the trachea and stoma, and partly to the long and compliant cuff. This last feature, and the practice of employing a tube that fits snugly into the trachea, allows the use of minimal cuff inflation pressure to obtain an airtight seal in the trachea.—We are, etc.,

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J. H. KERR.
J. M. K. SPALDING.

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Department of Neurology,
Radcliffe Infirmary,
Oxford.

REFERENCES

[1] Kerr, J. H., Spalding, J. M. K., and Crampton Smith, A., *International Anaesthesiology Clinics*, 1969, in press.
[2] Salt, R. H., Parkhouse, J., and Simpson, B. R., *Lancet*, 1960, 2, 407.

Anaesthesia for Dental Patients

SIR,—I would like to draw attention to what appears to be an anomaly in the terms of service of the consultant anaesthetist.

A National Health Service patient receiving National Health Service dental treatment from a National Health Service dentist (in his surgery) can receive anaesthesia only from a doctor who is acting in a private capacity, but who is paid a fee indirectly supplied by the National Health Service.

Having regard to the wide range of services available on the Category II list[1] it seems reasonable to suggest that dental anaesthesia of this sort should also be included in Category II. It certainly appears anomalous that the services of a private practitioner must be enlisted for this single small feature of what is otherwise a completely National Health Service provision. Anaesthesia for private dentistry in surgery or nursing-home would, of course, remain the prerogative of the private anaesthetist.—I am, etc.,

Cardiff. D. WAKELY.

REFERENCE

[1] *National Health Service. Terms and Conditions of Service of Hospital Medical and Dental Staff (England and Wales) and Headquarters Medical Staff of Regional Hospital Boards (England and Wales)*, 1 February 1967.

Allergic Intolerance to Tetracosactrin

SIR,—With the introduction of tetracosactrin (Synacthen) it was expected that the problem of allergic reaction to administered adrenocorticotrophic hormone was finally overcome.[1,2] This was anticipated, as it was a synthetic, and therefore pure, preparation, and also through the omission from the polypeptide chain of the terminal 15 amino acids responsible for the immunological and antigenic properties of naturally occurring A.C.T.H. The remaining chain of 24 amino acids was shown to have unimpaired adrenocortical stimulating activity,[3] while patients hypersensitive to natural A.C.T.H. were shown to tolerate tetracosactrin in all publications to date.[2]

We report here a case of allergic intolerance to tetracosactrin believed to be the first encountered.

The patient, a female aged 51, had been attending the department of dermatology for three years for the treatment of a persistent eczema. She had for a period required oral corticosteroids, but these were stopped in September 1968. Her skin deteriorated steadily thereafter and treatment with weekly injections of Synacthen Depot, 1 ml. containing 1 mg. tetracosactrin, was commenced in January 1969.