recognized sense. The criteria of Tow and Cheng for hysterectomy, applied to our series, would result in fewer hysterectomies being performed. Hysterectomy should be reserved, as they themselves assert, for selected cases and not used in childless women who do not need it or in patients with advanced disease who die as a consequence of it.

Far more important than a contrived argument about hysterectomy is the problem of ensuring the effective follow-up of all mole cases, so that patients who need treatment receive it before the chance of recovery is lost. Patients still die because the follow-up methods available are inadequate or not even used. A reliable centralized follow-up system could now be devised with the technology available in the United Kingdom. There is a case for making hydatidiform mole a notifiable disease.—I am, etc.,

Fulham Hospital,
London W.6.

K. D. BAGSHAW.

Trephine Biopsy of the Lung

SIR,—Dr. S. J. Steel and Dr. D. P. Winstanley report (1 July, p. 30) that they have not encountered any instance of air embolism in one hundred trephine biopsies of the lung.

I hope they will not allow one hundred consecutive pieces of good fortune to convince them that their technique is safe. The insertion of a cannula into the lung and the removal of its trocar can cause rapidly fatal air embolism. I have known one such case. If the technique can be modified so that the cannula is kept occluded throughout this risk may be reduced.—I am, etc.,

Whittington Hospital,
London N.19.

A. L. JACOBS.

Scopolamine with Morphine

SIR,—Dr. J. S. Crawford questioned recently (21 January, p. 172) the accuracy of a statement made in an earlier leading article (26 November 1966, p. 1282) to the effect that combinations of scopolamine with morphine in the management of labour caused more depression of respiration in the newborn than did morphine alone. Some results obtained here using the pregnant rat as a laboratory model are of interest in this context.

Drugs were given to the mothers by the subcutaneous route after determination of the normal rate of respiration. The frequency of maternal respiratory movement was assessed again after 30 minutes and any change expressed as a percentage of the control values. The mothers were then killed by dislocation of the neck, the young delivered by caesarean section, and five from each mother placed in the separate chambers of a respirometer, the details of which were described recently.¹ Respiratory activity of the young was expressed as oxygen consumption/100 g./minute, corrected to s.t.p. Six mothers, and therefore 30 newborn, were used to study each drug and dose combination. Some of the results obtained are summarized in the accompanying table.

Scopolamine alone at a dose level of 4 mg./kg. had negligible effect on maternal and neonatal respiration. Morphine alone at 1.25 mg./kg. did not significantly affect the maternal respiratory rate, but resulted in the young being born with a substantially reduced oxygen con-

sumption (17.9% depression from control values). When the mothers were treated with both drugs in combination the young were no more depressed than with morphine alone, but the maternal respiratory frequency was very significantly reduced. The same pattern emerged using different dose combinations, and the effects of 0.5 mg./kg. scopolamine with 6.25 mg./kg. morphine is also shown in the table.

Effects of Morphine and Scopolamine Administered to Pregnant Rats at Term on the Respiratory Rate of the Mothers and the Rate of Oxygen Consumption of the Newborn

Drug	Mean Depression of Maternal Respiratory Rate (% Control)	Mean Depression of Neonatal O ₂ Consumption (% Control)
A Scopolamine, 4.0 mg./kg. ..	0*	2.75 ± 1.91
B Morphine, 1.25 mg./kg. ..	0.48 ± 2.58	17.9 ± 2.67
A + B ..	16.2 ± 3.9	15.28 ± 2.64
C Scopolamine, 0.5 mg./kg. ..	0*	4.43 ± 1.00
D Morphine, 6.25 mg./kg. ..	9.4 ± 1.8	25.4 ± 1.61
C + D ..	42.3 ± 3.2	25.9 ± 1.16

* The means for scopolamine alone actually represent insignificant degrees of stimulation.

† Not significantly different from the relevant means for placebo-treated animals.

These results suggest that, so far as the rat is concerned, scopolamine does not potentiate the neonatal respiratory depression caused by maternally administered morphine. The projection of results from the animal pharmacology laboratory to man should be treated with caution. However, although there appears to be no recent reliable report of a clinical investigation of scopolamine-morphine combinations in the management of labour, the data presented by Flowers² using pethidine support the pattern observed in the rat study. The Apgar scores of infants delivered from mothers receiving scopolamine and pethidine were very clearly not different from those of infants born of mothers treated with pethidine alone.—I am, etc.,

GARETH F. BLANE.

Pharmacology Laboratories,
Reckitt and Sons Ltd.,
Hull, Yorks.

REFERENCES

- Blane, G. F., *Brit. J. Pharmacol.*, 1967. In press.
- Flowers, C. E., *Obstetric Analgesia and Anesthesia*, 1967, p. 207. London.

Infant-scalp-vein Needles

SIR,—Dr. C. F. P. Wharton (10 June, p. 702) and Mr. H. F. Nagamia (1 July, p. 48) have recently reported that an infant-scalp-vein drip is superior to conventional intravenous cannulae for treatment of adults in certain clinical situations. I should like to add a further indication for the preferential use of this type of drip.

In myelosclerosis and aplastic anaemia the veins become sclerosed and thrombosed, owing to the oft-repeated venepuncture needed for regular transfusion. A stage is reached when it is almost impossible to insert a conventional cannula, so that after many unsuccessful attempts—each of which causes further venous sclerosis—the patient may be greatly distressed.

For several months I have been using an infant-scalp-vein drip for the weekly infusion

of packed cells into a patient suffering from myelosclerosis. Insertion of the needle is far easier than with ordinary intravenous cannulae, so that the patient has much less discomfort and apprehension. It takes on average between three and four hours to infuse 270 ml. (½ pint) of packed cells when the hydrostatic pressure forcing the blood into the vein is increased by elevating the bottle of blood as high as possible. If a leg vein becomes obscured by oedema, secondary to congestive failure, the oedema should be removed by a diuretic the day prior to the infusion. The use of the diuretic would also prevent circulatory overload.—I am, etc.,

A. D. HOLLIDAY-RHODES.

St. Catherine's Hospital,
Birkenhead, Cheshire.

Is Anaesthetist Dentist's Agent?

SIR,—The annual report of the Manchester Local Dental Committee for the year ended 31 March 1967 states that a dentist was found to have broken his contract under the N.H.S. "by virtue of having charged patients an additional fee for the administration of endotracheal anaesthetics."

I must point out, as the distinction is important, that the Minister's final decision in this case conspicuously failed to state that the dentist had charged a fee, and therefore failed to support the executive council's contention that the anaesthetist was the agent of the dentist who had therefore in law charged these fees. Indeed, the Minister did not even mention this point, although the executive council had asked for a specific ruling on whether or not the anaesthetist is in law the agent of the dentist.

Throughout this case the Ministry was informed that I had charged these fees, and counsel for the dentist, at his appeal to a N.H.S. tribunal, pointed out that I had a legal right to charge these fees, and that I was not in law the agent of the dentist. This tribunal's findings were never published, nor were they quoted by the Minister in his final decision.

The Minister, unable to find that the dentist had charged a fee via the anaesthetist as his agent, gave it as his final decision (from which there is no appeal under the N.H.S. regulations)¹ that the dentist had broken paragraph 6(2) of his N.H.S. contract by suggesting a fee, for the dentist had very properly warned his patients that I might charge a fee for tracheal intubation and in each case advised the Dental Estimates Board when I had charged such a fee.

Paragraph 6(2) states: "Except as otherwise provided in the regulations, a practitioner shall not suggest, demand or accept from any patient or from any other person the payment of any fee or remuneration in respect of any treatment which he is required to give under these terms of service."

Having failed to state that the dentist had charged additional fees for endotracheal anaesthetics, and knowing from the evidence that I had, the Minister penalized the dentist for his so-called breach of contract by ordering that the fees, which he knew I had charged, should be withheld from the dentist's remuneration and returned to the patient.

I am writing this letter (as a supporter since my student days of a National Health

Service, with over 17 years' experience of the N.H.S.) because legally I have no standing in this dispute and therefore no opportunity to challenge the Minister's decision in open court—a test which it would not pass. Inside the N.H.S. the Minister has enormous powers, and that these powers should be used within the law is even more important than the details of this case. It is, however, particularly regrettable that the N.H.S. should now be the biggest single obstacle to the greater availability in the dental surgery of the most important safety factor in modern anaesthesia—tracheal intubation.

"Undoubtedly the safest method of operating in the oral cavity is under endotracheal anaesthesia. . . . But the numbers of patients are too great for such a methodical approach" according to your recent leading article on dental anaesthesia (25 February, p. 447). The numbers will not be too great when the Ministry removes the disabilities improperly imposed on the consultant anaesthetist working in the dental surgery.—I am, etc.,

Manchester. ARNOLD M. DANZIGER.

REFERENCE

- ¹ The N.H.S. (General Dentist Services) Regulations, 1964, No. 755, p. 15.

Cardiac Catheter Introducer

SIR,—I was interested in Dr. J. MacKinnon's letter (6 May, p. 377) referring to a shoehorn-type of catheter introducer for small veins or arteries. A very suitable and cheaper version can be readily made by a hospital instrument-maker from an ordinary Luer lok needle. The needle (15 to 18 gauge) is bisected along most of its length, and the short tip is bent at a right angle.

The catheter is passed along the hollowed-out tip, which occupies less of the vessel lumen than the two blades of an angled non-toothed iris forceps which I had previously used. It follows that this simple instrument is suitable for all types of vascular catheterization and need not be restricted to heart catheterization.

I claim no originality for this description, as I recently saw it used in several centres in the U.S.A.—I am, etc.,

W. G. SMITH.

Sir Charles Gairdner Hospital,
Shenton Park,
West Australia.

Amitriptyline and Heart Block

SIR,—That amitriptyline and nortriptyline in therapeutic doses can precipitate complete heart block is suggested by the following clinical history. Complete heart block after overdose of amitriptyline has been reported in children,¹ and has been recorded in experimental animals.² We have been unable to find any other reports of complete heart block

following the administration of amitriptyline or nortriptyline in therapeutic doses.

A 73-year-old woman was readmitted to Wellington Hospital in April 1967 because of transient blackouts of recent onset. It was found that she was having episodes of complete heart block, alternating with sinus rhythm, and that Stokes-Adams attacks accompanied the onset of the bradycardia. Her past history included osteoporosis of the spine, mild iron-deficiency anaemia, and mental depression. In December 1966 she had commenced therapy with ferrous gluconate, calcium gluconogalactogluconate, calciferol 50,000 b.d., and nortriptyline; the dose of the last had been increased gradually to 50 mg. t.d.s., but was reduced to 25 mg. t.d.s. because of postural hypotension. There was no past history of cardiovascular disease, and apart from an apical systolic murmur there were no abnormal cardiovascular signs during periods of sinus rhythm. Serum calcium remained normal on this regimen.

Her arrhythmia and Stokes-Adams attacks were treated with sublingual isoprenaline and oral isoprenaline hydrochloride, and her usual therapy was continued. Because of continuing Stokes-Adams attacks, all therapy was stopped and intravenous isoprenaline given. After two days there were no further Stokes-Adams attacks, nor evidence on E.C.G. monitoring of heart block, and for the next 11 days, while maintained on isoprenaline hydrochloride 15 mg. four-hourly, she remained in normal sinus rhythm. Nortriptyline 25 mg. t.d.s. was recommenced, and she continued on isoprenaline. Four days later mefenamic acid (Ponstan) was commenced for back pain. After seven days on nortriptyline further episodes of heart block with Stokes-Adams attacks were observed. Isoprenaline was increased to 45 mg. three-hourly, but attacks continued. After three days of occasional episodes of heart block it was considered possible that nortriptyline might be responsible, and it was discontinued. Stokes-Adams attacks continued for another day, but there were no episodes over the following three days. Since amitriptyline therapy was helping her depression, and its continued use was therefore desirable, it was decided to observe the response of the patient to an intravenous injection of amitriptyline (nortriptyline injections were not available). Isoprenaline 45 mg. three-hourly was continued during this time.

While resting in bed the patient was given 25 mg. amitriptyline, diluted to 20 ml., at the rate of 2.5 mg. every 2 minutes for 20 minutes. Continuous E.C.G. monitoring revealed no abnormality for the first hour after injection, but at 69 minutes post-injection complete heart block occurred without any subjective awareness. Sublingual isoprenaline rapidly reverted her to sinus rhythm, but for the next few hours there were further episodes of complete heart block, but no true Stokes-Adams attacks. By the following day, and during the next 12 days, she remained free of symptoms, nor did an hourly pulse chart reveal any evidence of bradycardia, despite a reduction in, and final withdrawal of, isoprenaline during that time.

It thus appears likely that the occurrence of complete heart block, with or without Stokes-Adams attacks, during or shortly after the cessation of two oral courses of nortriptyline, and following the intravenous administration of amitriptyline, was precipitated by those drugs.—We are, etc.,

R. B. SMITH.

BARBARA J. RUSBATCH.

Medical Unit,
Wellington Hospital,
Wellington, New Zealand.

REFERENCES

- ¹ Sunshine, P., and Yaffe, S. J., *Amer. J. Dis. Child.*, 1963, 106, 501.
² Lamarche, M., et al., *Nutley Cont. Circ.*, 1966, 53, 143.

Cervical Smears

SIR,—Like Dr. M. B. Carson (15 July, p. 177), I have been carrying out cervical smears on all my female patients between the ages of 25 and 60 years for the past 18 months.

In a relatively small series of 350 smears (out of 2,900 in a single-handed practice) I have had four patients with positive smears, all of whom have had cone-biopsies and the diagnosis of carcinoma-in-situ thus confirmed. (Incidentally, one of these patients is aged 24.)

In one of the other patients, aged 44, the cone-biopsy confirmed the diagnosis, and, there not being signs of any invasion, it was advised that she be followed up by three-monthly routine smears. When I submitted Form E.C.74 duly signed by the patient—who is fully aware of her diagnosis and the importance of having her three-monthly smears—and having indicated on the form that the patient required regular repeat smears, my claim for payment was rejected because "the patient had a smear taken in the previous five years."

This, Sir, strikes me as the most incredible of all incredible anomalies in which the Ministry of Health is so excelling. Having uncovered and treated what the test is designed to do, as soon as the test becomes an important and valuable prognostic tool it no longer attracts a fee. It is insulting enough to have to claim a ridiculous fee and to get the patient to sign—as if we were all crooks—but when the test becomes a follow-up measure then one is obviously no longer providing a service, at least not in the Minister's thinking.

What then, if I may ask, is the purpose of the test?—I am, etc.,

London E.1.

K. E. SCHOPFLIN.

SIR,—In relation to Dr. M. B. Carson's letter (15 July, p. 177), I can report how this regulation is carried to the bureaucratic extreme. I have just had payment refused for a smear because I carried this out precisely 17 days before the patient's 35th birthday. The age limit for smears seems particularly inappropriate in this practice, since the only two deaths from carcinoma of the cervix in the past years have been in patients in whom it was first diagnosed at the age of 33 years.—I am, etc.,

Street,
Somerset.

R. D. LAST.

Experiments on Man

SIR,—Further to my letter (8 July, p. 109) offering qualified support to Dr. M. H. Pappworth's views, as expressed in his book *Human Guinea-pigs*, it has occurred to me that the printing of the name of my hospital might be construed in some quarters as implying that "human experimentation" was, or has been, taking place there.

I would be most grateful if you would allow me to make it absolutely clear that the opinions I expressed (which I maintain) were entirely my own, and that to the very best of my knowledge and belief absolutely nothing that could be thus interpreted takes or has taken place at this hospital. I am proud and pleased to be able to say this in all honesty.—I am, etc.,

Queen Elizabeth Hospital,
Birmingham 15.

B. W. ROPER.