inserted it slightly crookedly so that its mouth was directly adjacent to the mouth of the outlet (Fig 2). This led to air being drawn into the set. Approximately 25 ml. of air alternated with 25 ml. of fluid in the tubing of the set, and when the drip chamber was filled it emptied again within six seconds. We later found that this situation can also occur if the force required to insert the air inlet into the bottle pushes the shaft of the needle back into its plastic holding.

We have mentioned this complication, which can occur with some of the other Baxter sets, to the manufacturers. They point out that if the directions for use are correctly followed air should not be drawn into any drip set. Nevertheless, they have agreed to modify the sets to make such events impossible.—We are, etc.,

M. GILMORE.
J. CLINCH.

Department of Obstetrics and Gynaecology,
Regional Hospital,
Galway, Ireland.

Purification of Ampicillin

SIR,—We have read with interest the letter by the Bristol Laboratories group of workers on purification of ampicillin (20 June, p. 735) in which they comment on our previous publication (21 February, p. 469). The Bristol workers rightly draw attention to the possibility of penicilloylation of mycobacteria influencing our results, and indeed this may account for the antibody levels obtained with the purified ampicillins, but it cannot be argued that this is an effect found with some ampicillin batches and not others.

The question is raised by Dr. O. B. Fardig and his colleagues whether immunogenic response or chemical analysis is the more critical test for detecting sensitizing protein. The clinical importance of protein residues in penicillins relates to their ability to stimulate immunological responses and to the fact that they are penicilloylated and induce the formation of antibodies of penicilloyl specificity. For this reason, in a largely clinical paper, we presented data relevant to the biological activity of these residues rather than to chemical analysis.

For similar reasons, we consider that immunization with the material that will be used clinically—that is, ampicillin itself—is more relevant than data relating to the use of isolated residues as was done by Dr. Fardig and colleagues, especially when so few batches were examined by these authors. We have immunized experimental animals with high molecular weight materials isolated from commercial penicillins, not only primates as mentioned in our paper, but also rabbits and guinea pigs (unpublished).

We fully agree that ampicillin prepared from a natural penicillin by chemical splitting is unlikely to contain protein of bacterial enzyme origin. Such ampicillin may, however, contain protein from the starting benzylpenicillin which survives the chemical process. The penicilloyl specificity and therefore potential clinical significance of such a contaminant make it no less important to demonstrate the absence of such materials in ampicillin prepared from chemically derived 6-aminopenicillanic acid as in ampicillin prepared from fermentation derived 6-aminopenicillanic acid. That protein

can survive the chemical splitting process has been demonstrated and the results are to be published.—We are, etc.,

E. T. KNUDSEN.
JANET M. DEWDNEY.

Beecham Research Laboratories,
Betchworth, Surrey.

Drugs in Depressive Illness

SIR,—Dr. Z. Hussain (23 May, p. 482) reported preliminary results from a double-blind trial to compare the effects of Triptafen (amitriptyline and perphenazine), Fentazin (perphenazine), and a placebo containing atropine in the treatment of depression. He interpreted the results as showing a lack of significant difference between the treatments, a χ^2 test giving $\chi^2 = 1.52$ on 2 d.f. For the purposes of the test he pooled the numbers of patients classified as "improved," "much improved," and "recovered," thus blurring the sharp contrast between the numbers "recovered" (10 of 15 on Triptafen, 11 of 20 on Fentazin, and 2 of 19 on placebo). The results for the two active drugs can clearly be pooled, giving the following frequencies:

Degree of Improvement	Triptafen or Fentazin	Placebo
Worse	3	5
Unchanged	6	3
Improved	0	4
Much Improved	5	5
Recovered	21	2

A χ^2 test for trend,¹ which is sensitive to a possible tendency for one set of results to be more concentrated towards the poorer end of the scale than the other set, gives $\chi^2 = 7.78$ on 1 d.f. ($P < 0.01$). The trial therefore provides evidence for an antidepressant effect of one or both active drugs above that conferred by the placebo.—I am, etc.,

P. ARMITAGE.

Department of Medical Statistics and Epidemiology,
London School of Hygiene
and Tropical Medicine, London W.C.1.

REFERENCE

- ¹ Armitage, P., *Biometrics*, 1955, **11**, 375.

Upgrading V.D. Departments

SIR,—I would be grateful for a further opportunity to comment on the problem of medical recruitment in venereology. Firstly, let me say that Mr. A. J. King (4 July, p. 46) puts up better arguments for maintaining the present name of the specialty than he did 12 years ago in the discussion which followed my paper on this subject. Unfortunately, it would seem that he does not appreciate yet the real reasons which prompted me to propose that the specialty be renamed, nor, indeed, have other than superficial reasons for this change appeared in the recent correspondence. However, the benefits which would follow replacing the specialty of venereology with that of genito-urinary medicine would take a considerable time to materialize, would do little to alleviate the present shortage of medical personnel in training in venereology (which is much more severe than would appear from the information provided by the Department

of Health (*Supplement*, 9 May, p. 108), and nothing to help the potentially disastrous shortage of V.D. technicians.

I would repeat that in the short term recruitment of medical and lay staff into venereology in sufficient numbers to maintain the efficiency of the service will require much greater financial inducements than at present, including, as Dr. F. M. Lanigan-O'Keeffe (13 June, p. 670) mentions, consultants in the specialty having as good a chance of gaining a merit award as those in other specialties.—I am, etc.,

W. FOWLER.

General Hospital,
Birmingham.

Heart Valve Replacement

SIR,—Your leading article on the hazards of heart valve replacement (20 June, p. 677) omitted mention of subsequent pregnancy as a complication. Serious valvular disease of the heart may be associated with infertility, voluntary or otherwise,¹ but pregnancy may soon follow heart valve replacement or restoration of near normal function. While the risk of pregnancy to such a woman is not prohibitive, nevertheless it is likely increased,² and when medically or socially unwelcome is a preventable problem. Accidental pregnancy following heart valve replacement could be foreseen and prevented by suitably effective measures.

Postoperative care of potentially fertile women should include provision of effective contraception for those in whom temporary or permanent avoidance of pregnancy is decided upon after full consideration of the patient's wishes and her medical condition. If reversible means are desired, an oestrogen-progestogen preparation should be seriously considered in view of the acknowledged reliability of this method. Indefinite anticoagulant therapy is likely to reduce the thromboembolic risk of oral contraception to a very low level.—I am, etc.,

HAMISH N. MACDONALD.

Department of Obstetrics,
University of Leeds.

REFERENCES

- ¹ Mortenson, J. D., and Ellsworth, H. S., *Circulation*, 1963, **28**, 773.
² Macdonald, H. N., *Journal of Obstetrics and Gynaecology of The British Commonwealth*, 1970, (in press).

Consultancy in Radiology

SIR,—The discussion in your correspondence columns—"Consultancy in Radiology"—seems to call for an expression of views by the Faculty of Radiologists. Your correspondents, Dr. R. Eban (20 June, p. 736), and Drs. G. D. Duncan and J. A. Ross (11 July, p. 110), are all right in their various ways.

All radiologists who work in the N.H.S. hospital service, together with our employers, are desperately concerned about the position of diagnostic radiology in this country. As Dr. Ross says, there are more than 59 unfilled consultant posts in England and Wales. There are many causes for this, and it is difficult to place them in order of importance and equally difficult to solve them.