can be excluded is false. This must be emphasized because patients can have all the signs and symptoms of brucellosis without any demonstrable antibodies. The following case history illustrates the truth of this statement.

In May 1967 a 37-year-old man stayed on a farm during an abortion storm and drank raw infected milk every day. On 8 July 1967 he was thought to have malaria, but was later seen at night with a very severe headache, general aches and pains, and sweating profusely. He gave up wearing pyjamas. He was treated for a viral infection and was given tetracycline for three weeks. He felt fit until 29 July, when his symptoms returned. On 1 August brucellosis was diagnosed and he was admitted to hospital on 5 August.

Blood culture taken on 8 August grew Brucella abortus biotype 1; this was reported on 27 September and he began treatment with tetracycline and streptomycin. He felt much better with a good response. At the end of October 1967 he had a relapse. He had a further relapse lasting 14 days in May 1968, when his spleen was found to be palpable. On 1 July he was given an intradermal injection of brucellicum. The next day he felt a little unwell, and on 3 July the brucellin test when read was completely negative.

He had two further relapses, in November 1969 and August 1970, and was treated each time with tetracycline. When seen on 1 March 1973 he had been quite well mentally and felt tired. This commenced a week after an injection of brucellicum in December. He thought he had “flu” and could not understand the symptoms because of his recent vaccination. Since then he has felt better, however, when last seen was feeling tired but much better.

Over a period of years his blood was examined and the serum proteins were fractionated by “anaphase globulin” (Coombs), and complement fixation tests carried out. These were done on seven occasions between 1969 and 1973 with negative results. Three sera were examined using an antigen prepared from the organism isolated from the patient and also with negative results. In blood taken on 21 May 1968 the serum IgM level was 104 mg/100 ml normal 10-50.

In the past I have received numerous specimens from patients complaining of symptoms suggestive of brucellosis who were in close contact with infected cattle. The question must arise, when it is impossible to demonstrate antibodies to brucella and no other diagnosis has been made, as to whether these patients are suffering from brucellosis, particularly in the light of the case quoted. Unfortunately blood cultures yielding Br. abortus are rare in brucellosis except in people who have been in close contact. The diagnosis then depends on establishing the diagnosis of brucellosis in a patient who does not produce antibodies.

One further point in the leading article that I would like to take up is the statement that the acute disease usually dies out in the patient within a year of infection. I wonder how many people would agree with this statement? Certainly it is no reason to allow a case of acute brucellosis to go untreated, and such an action or lack of action would amount to negligence. The acute case generally readily responds to treatment, while in the chronic case treatment is extremely difficult and very disappointing. No one who has made the diagnosis of brucellosis in the acute stage would neglect to give adequate antibiotic therapy for at least six weeks— I am, etc.,

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Copiding with Minor Casualties

STIR.-Before more words are wasted would someone please define “minor casualty” for me? Mr. D. Lamont (23 March, p. 573) appears to believe that the ambulant state of the patient is the criterion.

The “young man” he advocates for the “lowsy function” of “eliminator” will fail to diagnose the ruptured metacarpal-phalangeal ligament or the severed tendon or nerve concealed beneath the most trivial of cuts if he is denied the right to perform a full, unhurried examination of the injured part. He would also need more than an “apartment” to provide tetanus prophylaxis, simple dressings, and “etc.”? Heaven forbid that he should even think about removing foreign bodies from eyes in inadequate surroundings and without proper examination.

It is not the ambulant patients who block the casualty officer’s time; it is the ubiquitous “collapse.” These patients are all brought by ambulance in response to 999 calls and all require full examination. But most of these are cases of social problems, long-standing abdominal pains, minor cerebrovascular accidents, faints, dunks, hysterics, and various psychosomatic disorders. I do not think the present order of time to sort out and which, I feel, could be dealt with far more effectively and efficiently by the G.P.

Surely if an eliminator is required in a casualty department, he should be able to use his experienced doctor and available “not the most junior medical member of the staff.”—I am, etc.,

TREATMENT OF MENINGOCOCCAL CARRIERS

STIR.—With reference to the paper by Dr. D. M. Easton and others (16 March, p. 507), I feel that it is not a fact that “treatment of meningococcal carriers is not effective in the majority of the tetracycline antibio-otics—namely, minocycline (7-dimethyl-aminomethyl-6-dimethylaminomethyl-tetracycline). It has been shown1d that minocycline 100 mg twice daily for a period of probably not less than five days significantly reduces the number of nasopharyngeal carriers of meningococci.” This is not the case. Although information was completed to date there has been no evidence of resistance of Neisseria meningitidis to minocycline.—I am, etc.,

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Tobacco substitutes and the induction of ovulation

STIR.-I am reporting these findings in the hope that they will be of some use to those women who have been disappointed in the results of treatment with chlorpropamide or oral contraceptives. It is hoped that these differences are primarily related to an effect of mestranol or perhaps the lower dose of norethisterone.

The other more significant point we wish to make concerns the high output of oestrogen in some of the oral-contraceptive-treated cycles. The fact that there was this evidence of marked ovarian activity in the absence of ovulation in two of these women and that active steroidogenesis was taking place in most of the other treatment cycles merits further comment and investigation.

We await with interest the results of the studies of Drs. Jacob and Jequier, particularly as they suggest that there may be differences in the effects of ethyl oestradiol and mestranol in the pituitary ovarian mechanism, as suggested in our paper.—We are, etc.,

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Contraception and abortion

STIR.—King’s Termination Study II (9 March, p. 418) really tells us very little that is new and also draws some conclusions for which no basis exists in the published findings.

It is widely accepted that the closer the doctor-patient relationship the better are the results of treatment. The King’s College Hospital figures have shown that this is also true when applied to enthusiastic contraceptive advice and its success. However, I remain to be convinced that it was the peremptory sort of advice that was necessary to this success. A less liberal but equally compassionate approach (the two are mutually exclusive) to requests for termination, coupled with proper contraceptive advice and enthusiastic follow-
up, should yield equally impressive results.
If the authors are sceptical of this they should carry out a further study along these lines.

The authors' belief that "there will always be some women who will be forced to seek legal termination" prompts me to ask who do they think is going to apply to this procedure? If it is the "force" of suggestion by society via husband or boy-friend, then surely the doctor must redress this imbalance by ensuring that his patient understands as far as possible the full implications of her request.

In conclusion, the authors hope that the unhappiness of many of their patients has been replaced with the possibility of a brighter future by this policy of abortion and contraception is, with respect, a little naive and also premature. They are no doubt aware of the increasing weight of evidence linking therapeutic abortion with subsequent infertility,1 miscarriages,2 pre-maturity, increased perinatal mortality rate,3 and various gynaecological problems.4 Have they any evidence that the 360 women in their study are going to be exempt from such consequences?—I am, etc.

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2 Edith, C. W., Campbell, S., and Beazley, J., Lancet, 1972, 1, 1278.

Antibiotic Discs Active against Resistant Organisms

Sir,—The letter by Mr. D. F. J. Brown and Dr. J. B. Selkon (23 March, p. 573) prompts me to describe a similar experience.

While I was attempting to demonstrate that penicillinase-producing Staphylococcus aureus produced zones of inhibition around penicillin discs the organism was inoculated on to DST agar medium (Oxoid) on which discs were placed to contain 5 units of benzylpenicillin and 2 μg, 10 μg, and 25 μg ampicillin respectively. The bacteria were plated on the discs and it was found that no zone of inhibition did not show any zones of inhibition, a zone of 24 mm diameter was seen around the 2-μg ampicillin disc. The edge of this zone did not have the typical heaped-up appearance seen with penicillin disks, but rather a dome-like shape. Furthermore, other 2-μg ampicillin discs of the same batch did not show a zone of inhibition when tested against Escherichia coli (NCTC 10418), a known sensitive strain.

The zone of inhibition produced by these evidently faulty discs when tested against the Oxford strain of Staph. aureus (NCTC 6571) was neither reduced nor eliminated by the addition of penicillinase to the medium, which is the usual procedure when these discs are used. The zone was being produced by 2-μg, 10-μg, and 25-μg ampicillin discs of other batches. Obviously the suspect discs did not contain the antibiotic with which they were labelled. Attempts to identify the antibacterial substance in these discs penicillinase prevented zone formation being produced by 2-μg, 10-μg, and 25-μg ampicillin discs of other batches. These experiments show that it is possible to have penicillinase-producing strains of Staph. aureus which are insensitive to penicillin and that this is a common phenomenon.

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Six vials of this batch of faulty discs had been recently received in the laboratory and stored at 4°C. Several discs from each vial gave similar results to these discs not produced a satisfactory zone with the Gram-negative control strain of E. coli (NCTC 10418) in the routine tests it might have been assumed that they contained an incorrect amount of the intended drug. The fact that the absence of the antibiotic other than that intended would not have been immediately evident.

Unlike the experience of Mr. Brown and Dr. Selkon all the discs tested in the batch were found to be faulty. The zone detected by the manufacturers' quality control procedures. Clearly, there is a need for urgent action to ensure that antimicrobial drug sensitivity discs comply with the manufacturers' description of them.—I am, etc.

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Growth after Renal Transplantation

Sir,—Your leading article (1 December 1973, p. 505) raised pertinent questions concerning the crucial role of growth in the rehabilitation of children treated with chronic dialysis and transplantation. I do not believe that your statement that "the growth problems on dialysis are usually less than those following transplantation" is supported by the little evidence that is available. Evaluation of growth data of 46 children dialysed longer than a year in four centres1–4 and seven children in our centre reveals that only six of the 53 grew at a normal rate for their age and sex (four of seven in our centre). Growth after transplantation appears to be better. Grushkin and Fine5 reported normal growth of six of 26 children followed up longer than a year, though a more pertinent figure would be six of 18, since eight children already had fused epiphyses at the time of transplantation. In children treated with alternate-day prednisone, 6–12 found normal growth in four of 10. Of a total of 38 children in our centre, only seven grew at a normal rate; all seven were in a group of 21 who were treated with alternate-day rather than daily prednisone.

The factors causing growth retardation in children on dialysis and after transplantation are incompletely understood but seem to be primarily calorie deficiency in the former and steroid therapy in the latter. Some improvement in growth has been noted with the use of calorie supplements in children on dialysis6 and alternate-day prednisone regimens in children post transplant.6,7 At present, however, the long-term growth of most children treated with either dialysis or transplantation is poor and the available evidence does not support the statement that dialysis is preferable to transplantation in this regard.—I am, etc.

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1 Moore, E. W., Gastroenterology, 1971, 60, 43.

The "Filth Row"

Sir,—Cleanliness in public buildings conducive to morale as well as to health. Schools, which should be educative, and hospitals, where the frail are congratulated, are par-