unteers on the off-chance that their organs might one day be suitable for transplantation.

It would have been more appropriate if the subcommittee had directed attention to the main ethical dilemma of organ transplantation—namely, the fact that only some 10% of the 2,000-3,000 young people needing treatment for terminal renal disease are being helped, the rest being allowed to die, despite the established fact that many of them would be provided with worthwhile therapy if more donor kidneys were available.

A change in the law with provision for "contracting out" is the only way in which there can be a solution to the shortage of donor organs. This was accepted by the majority of the MacLennan committee and legislation along these lines has already been adopted in Denmark, France, Israel, Italy, and Sweden.—I am, etc.,

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Chemotherapy of Bronchitis

SIR,—In your leading article on the chemotherapy of bronchitis (17 January, p. 125), a combination of fucidin and cloxacillin is suggested as an orthodox treatment for staphylococcal pneumonia. However, you then observe that these antibiotics may be antagonistic under *in vitro* conditions. You therefore recommend a combination of fucidin with erythromycin for staphylococcal pneumonia. Not only is there no possibility of antagonism, but erythromycin is also more effective than cloxacillin against pneumococci, which may also be present.

Antagonism between fucidin and the penicillins, demonstrated by Eriksen,¹ is found when staphylococci are incubated for 24 hours in the presence of both antibiotics. Because of the inhibitory effect of fucidin, the staphylococci do not multiply and cannot therefore be destroyed by the otherwise bactericidal action of penicillin. However, this type of observation cannot be applied directly to conditions *in vivo*. It is also important to show if antagonism can be demonstrated after more than 24 hours, as a period of treatment of only 24 hours has no relevance to clinical practice. An investigation done in collaboration with K. A. Jensen (unpublished observations) showed that while antagonism can be observed after 48 hours' incubation of the staphylococci in the presence of the two substances, after 72 hours only very few staphylococci survived the combined effect. After five days, no antagonism can be shown. This corresponds more closely to the conditions *in vivo*, where treatment is normally continued for at least a week.

On this basis we have treated 86 cases of staphylococcal pneumonia with a combination of fucidin and methicillin (72 cases) or penicillin G, as part of a larger series of 270 cases of serious staphylococcal infection reported elsewhere.² Of our 86 patients, 40 (47%) were aged over 60, and 64 (74%) had severe debilitating disease. The total mortality rate in the group was 40%, but in only 18 patients (21%) was the staphylococcal infection either the primary or contributory cause of death. In 10 of these 18

patients death occurred within the first 24 hours of therapy. It should be emphasized that in 22 patients without predisposing disorders there were no deaths.

These results may be compared with a series in which similar categories of patients were treated with a penicillinase-stable penicillin alone. Brayton and Louria³ treated 15 patients suffering from staphylococcal pneumonia with nafcillin or cloxacillin, with a mortality of 47%. Klein and Finland⁴ used methicillin to treat 28 patients with lower respiratory tract infection caused by staphylococci, with a mortality of 46%; 27 patients were treated with oxacillin with a mortality rate of 44%; and 24 patients were treated with diphenicillin with a mortality of 67%. Martin *et al.*⁵ treated 23 patients with penicillinase-stable penicillins, observing that 61% of the deaths were due directly to staphylococcal infection.

A comparison with the available published results therefore suggests that the combination of fucidin and methicillin in the treatment of staphylococcal pneumonia is at least as effective as the penicillinase-stable penicillins used alone, and may well be more effective. While our experience is limited to methicillin, and not cloxacillin, both drugs have similar bacteriological characteristics, and it is difficult therefore to reconcile our clinical results with the proposed *in vitro* antagonism between the two drugs. *In vitro* antagonism, as measured by current routine techniques, may indeed have little relevance to what actually happens in practice.—I am, etc.,

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Haemolytic Anaemia in Pregnancy in Nigerians

SIR,—I read with interest the article by Drs. A. F. Fleming and N. C. Allan (22 November, 1969, p. 461) on "Severe Haemolytic Anaemia in Pregnancy in Nigerians Treated with Prednisolone." The conspicuous absence of a reference to glucose-6-phosphate dehydrogenase deficiency (and, incidentally, to serum iron levels) needs a little comment.

Edington and Gilles¹ state: "G-6-P.D. deficiency plays an important role in the pathogenesis of a variety of haemolytic anaemias in the tropics." Now in West Africa between 10 and 15% of the population have a partial or total deficiency of this enzyme. Urinary tract infection in pregnancy is as common in West Africa as in Europe. Moreover West African countries are notorious for selling in the open market drugs which elsewhere can be dispensed only in hospitals, at chemists, or in a pharmacy. Quacks also abound. Therefore patients often come to hospital having already dosed themselves with

chloramphenicol and/or nitrofurantoin—two drugs which appear in a recent list by Beutler² of some common drugs which may induce haemolysis of G-6-P.D.-deficient red cells. It is my clinical impression that here in Accra the total defect of the female (homozygote) is more severe than that of the male (hemizygote). The haemolysis of the female total defect seen here in Accra can sometimes be so catastrophic as to precipitate acute renal shut down.

Having myself seen in Korle Bu Hospital cases of persistent haemolytic anaemia with obscure hepato-splenomegaly in pregnancy, I hasten to concede that the type of "severe haemolytic anaemia in pregnancy in Nigerians" described by Dr. Fleming and Dr. Allan is quite unlike haemolysis due to G-6-P.D. deficiency. Nevertheless this hereditary quantitative erythrocyte defect could have played a minor role in one or two of the cases described, and should have been excluded just as hereditary qualitative haemoglobinopathy was excluded.

Incidentally, apart from the factors mentioned in the excellent discussion of Dr. Fleming and Dr. Allan's article, some other things to suspect in haemolytic anaemia of obscure origin during pregnancy in a non-sickler include Thalassaemia minor³, Hb CC disease,^{4,5} and systemic lupus erythematosus, —I am, etc.,

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Congenital Goitrous Cretinism due to Iodide

SIR,—The ingestion of iodides by the expectant mother is a documented cause of congenital cretinism in the infant. Cases still occur despite recognition of the hazards of proprietary substances containing iodides.

A male infant weighing 5 lb. 8 oz. (2.5 kg.) was admitted to the Stobhill Hospital nursery when one day old, having been born at home after a spontaneous vertex delivery. He was transferred to hospital because of slight cyanosis and failure to maintain a satisfactory temperature. He was lethargic, cold, oedematous and had strikingly cretinous facies. Temperature was 90°F. (32°C.). The thyroid was palpably enlarged. Respirations were irregular and there was poor air entry to both lungs. The liver was enlarged to one fingerbreadth and the spleen tip was palpable.

Since the birth of her fifth child, six years previously, the mother had been taking, unknown to her general practitioner, a proprietary asthma mixture. The contents of this mixture were: caffeine B.P. 2.8 W/V; sodium iodide B.P. 2.5% W/V; sodium benzoate B.P. 6.9 W/V; ephedrine hydrochloride B.P. 0.45% W/V; glycerin B.P. 20% W/V. The patient was consuming 30 ml. of this mixture per day.

Investigations: Blood urea 68 mg./100 ml.; chloride 104 mEq/L.; sodium 142 mEq/L.; potassium 6.0 mEq/L.; cholesterol 75 mg./100 ml.; alkaline phosphatase 19 K.A. units; and

serum-protein-bound iodine 19.0 $\mu\text{g.}/100\text{ ml.}$

The baby was started on L-thyroxine sodium 0.01 mg./day and ampicillin. The day after admission he suddenly collapsed and died.

On necropsy, the lungs were pinkish, but showed numerous areas of subpleural haemorrhage over all surfaces. There was no evidence of atelectasis. The thyroid was many times larger than normal, the enlargement being symmetrical, and the cut surface had a translucent appearance. Section: hypertrophic picture; the acini often tube-shaped, and tipped by tall epithelium. They contained scant or no colloid. There were fairly extensive areas of subarachnoid haemorrhage extending over an area from the anterior part of the parietal region to the occipital lobe; all on the lateral surface of the brain. Serial sections through the brain showed no gross abnormality. All other systems appeared normal.

Though the infant's death was primarily due to subarachnoid haemorrhage, post-mortem examination gave us an opportunity to observe the histology of the thyroid. It is unusual that an infant shows signs of cretinism at or shortly after birth. It seems probable that this is the result of maternal thyroxine passing across the placenta, which accounts for the euthyroid appearance in those infants who subsequently become cretinous in appearance.¹ Morgans and Trotter² described a baby who appeared cretinous at birth and whose mother had taken a proprietary asthma compound during pregnancy, the infant having a goitre at birth. The goitre disappeared spontaneously.

The infant described provides further evidence of the goitrogenic effects and dangers to the fetus of the antenatal consumption of proprietary asthma cures by the expectant mother.—I am, etc.,

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Steroids and Acute Pyogenic Meningitis

SIR,—Your leading article (3 January, p. 6) on pyogenic meningitis and steroid treatment prompts us to make some comments.

We have investigated¹ the results of steroid treatment in pneumococcal meningitis in 81 patients. The results are given in Table I. More patients in the steroid-treated

TABLE I.—*Pneumococcal Meningitis: Incidence of Factors Related to a Poor Prognosis in the Two Treatment Groups*

Conditions on admission	Controls		Steroid-treated group	
	No. of patients	No. of deaths	No. of patients	No. of deaths
Age over 60	9	6	7	1
Coma	6	3	13	4
Convulsions	7	3	7	1
Pneumonia	4	3	8	2
Leucocyte count in spinal fluid less than 1000/cu. mm.	10	4	14	3
Bacteraemia	23	7	21	1
Total no. of patients	37	10 (27%)	44	5 (11.4%)

group suffered from coma and pneumonia at admission. It is seen that among patients with bacteraemia the fatality rate was considerably higher in the control group. This corresponds to the experience gained from animal experiments, in which early treatment with hydrocortisone in pneumococcal bacteraemia revealed a favourable effect.²

It is stressed that the steroid treatment in our material was initiated at an early stage of the infection. No side-effects were observed and the incidence of sequelae was similar in the two groups (Table II).

TABLE II.—*Pneumococcal Meningitis: Incidence of Sequelae in the Two Treatment Groups*

	Controls	Steroid-treated group
No. of patients	37	44
No. of patients discharged	27	39
Slight sequelae (deafness, headache, facial paresis)	6	5
Severe sequelae (paresis, epilepsy, mental disturbance)	3	3

Though the difference in mortality between the two groups is not significantly different at the 5% level, our findings might suggest a beneficial effect of steroid treatment in pneumococcal meningitis.—We are, etc.,

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Pharmacological Aid for Faecal Incontinence

SIR,—The difficulties in keeping incontinent patients clean are great. Children particularly live in constant fear of an "accident," of the odour involved, of the shame, and of becoming a social outcast. We have not found the simple recommendations of the Spina Bifida Study Group¹ helpful in the treatment of our twenty incontinent children who wish to go to school, to social events, and to work. Enemata are not a good solution.^{2,3}

We have had remarkable successes with the following method of bowel-training, which invokes a conditioned reflex. This can be reinforced by the gastro-colic reflex, by stimulation of intestinal motility with neostigmine, and also by suppositories which irritate the rectal mucosa. The programme must of course be adapted to the patient's usual daily schedule, and the advantages of completing this duty early in the morning have to be weighed against the early hour at which the two-hour programme must be commenced.

The patient is given a tablet of neostigmine 15 mg. (up to two tablets if one is inadequate) at a fixed hour, preferably before a meal, on two or three days a week depending on the

frequency of the patient's earlier bowel habits. One-and-a-half hours later, or soon after the meal, the patient is given two glycerin suppositories per rectum. If these cannot be retained, the larger glycerin ovule, ordinarily for vaginal use, will usually remain in situ.

Twenty minutes after insertion of the suppository, the patient is seated on the toilet for ten minutes. If there is a small result, or no result, at the end of this time, an enema is given immediately. The need for this has been found to diminish progressively. Rectal (digital) examination is performed after the bowel action to confirm adequate emptying, especially in the early stages of training. Complete emptying of the rectum is essential, and if necessary the enema is repeated immediately.

By frequent trial over the weeks or months, the neostigmine dose is gradually reduced, and finally eliminated. Suppositories are continued at the scheduled time. Our physiotherapists have helped with some patients by education of the abdominal muscles.

Success with this regimen has enabled us to discharge a resident patient for fourteen years from all care except three-monthly supervision. Now aged 23, she had been admitted for meningo-myelocoele with complete incontinence, loss of sensation of perineum and feet, and partial paralysis of both legs. Braces enabled her to walk on crutches; she had for a long time managed her ileal conduit with complete independence, but it was only after the need for enemata was eliminated that she became confident of being able to cope at home.

The failures so far have been in younger children, probably because they are too young to collaborate actively.—I am, etc.,

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Appendicitis in Umbilical Hernial Sac

SIR,—Although acutely inflamed appendices have been found in inguinal hernias¹ and even in femoral hernias,² I could find only one reference to an appendix being found in an umbilical hernia. From Russia, Bulgakov reported an acutely inflamed appendix in a strangulated umbilical hernia of a ten-month-old baby.³ The rarity of the finding is probably due to the fact that the appendix is seldom found in the proximity of the umbilicus. It would, therefore, appear worthwhile to report the occurrence of a chronically inflamed appendix in an umbilical hernia of an adult.

The patient, a 63-year-old man, was first seen in the outpatient department in January, 1969 complaining of a red and painful swelling in the umbilical region. He had first noticed this swelling three months previously. It had subsided in a few days but had recurred one month later. His own doctor had treated him with tetracycline. He had never vomited, his bowel action was normal, and at no time had he lost his appetite. In the past he had had bilateral femoral