

ment during the third trimester of foetal death or deformity.—I am, etc.,

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### Dextran and the Placental Barrier

SIR,—Dextran 40 has been used to improve the maternal circulation through the placenta in an endeavour to relieve foetal distress during labour,<sup>1</sup> and this raises the question of whether the dextran crosses the placental barrier and reaches the foetus. Serum albumin has a molecular weight of 69,000 and all the molecules are of this molecular weight. Dextran 40 has a *weight average* molecular weight of 40,000 and a *number average* of about 25,000; it thus contains a very wide range of molecular weights. Some of this dextran crosses most of the permeability barriers in the body, so there was reason to suppose it might cross the placental barrier.

Samples of maternal and cord blood in three cases were taken at birth, which was within four hours of the mother receiving 400–500 ml. Dextran 40 in 30–40 minutes. Concentrations of 0.76, 0.75, and 0.5 g. dextran/100 ml. were found in maternal serum, and in each case no dextran could be detected in serum from the cord blood. Determinations were made using the anthrone method as described by Davies, Ricketts, and Williams.<sup>2</sup>

According to Bangham,<sup>3</sup> who worked with proteins labelled with radioactive iodine isotopes in monkeys, there is specific transmission of gamma-globulin across the placenta and albumin is transmitted some 10 to 20 times less easily; other globulins scarcely cross the placental barrier at all. The radius of a sphere equivalent to the albumin molecule is about 36 Å, which is within the range of molecular radii present in Dextran 40. Despite the presence of some molecules comparable in size with albumin, dextran apparently does not cross the placental barrier. This finding implies a temporary osmotic effect tending to withdraw water from the foetus, but so far as can be ascertained this has not proved detrimental. Some of the proteins of the amniotic fluid have been shown<sup>4</sup> to be derived from and return to the maternal circulation, and it is possible that dextran may reach the amniotic fluid in this way.—We are, etc.,

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### Sonne Dysentery

SIR,—We would like to reply to the points raised by Drs. P. J. Moorhead and H. E. Parry (12 March, p. 676).

We have accepted that the antibiotic sensitivity of *Shigella sonnei* by routine testing has no relevance to the drug therapy of Sonne dysentery. We agree, as we pointed out in our letter (19 February, p. 481), that the dose of streptomycin in the controlled trial is low; it is rather more than half the dose used by Drs. Moorhead and Parry. In our retrospective survey, however, the dose varied considerably, often being in excess of that used by these authors, yet the clearance rates in both our retrospective and prospective series were similar.

Drs. Moorhead and Parry constantly achieve such high clearance rates that one wonders if we are talking of the same disease. Is it possible that our sample of patients was unduly biased by a large proportion of patients in a chronic phase of their illness? The presence of a number of residential nurseries in our catchment area might support this view. If this is true it is important that Drs. Moorhead and Parry should show, not, as they have clearly done, that a high clearance rate is possible with drug therapy, but that this therapy is superior to no therapy.

One other point which we find difficult to understand is that in their original paper (16 October, p. 913) these authors showed that on the day following treatment approximately 9% of cultures were positive, and this had dropped to about 3% by the third post-treatment day. This suggests to us that the results reported by Drs. Moorhead and Parry are related to something other than the concentration of antibiotics in the stool. If the criteria of "cure" used in our prospective trial were applied to the data of Drs. Moorhead and Parry then clearance rates would be even better. This is yet another reason why these authors should show what is the spontaneous remission rate using their own criteria of cure.

We have no experience of kanamycin in Sonne dysentery, but in the only two patients treated with this drug before admission we observed nephrotoxicity. At the moment we do not feel that trial of this drug is justified in this infection.—We are, etc.,

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### Abortion Law Reform

SIR,—Following the recent correspondence in the *B.M.J.*, I would like to comment on some of the proposed changes in the law with regard to abortion.

I feel that too little respect is being shown to the gynaecologist, who will be the person to perform the operation. The concept of "medical certificates" is distasteful. As things are at present, a patient is referred to a gynaecologist by her general practitioner or by a fellow consultant with the suggestion that her pregnancy should be terminated. The gynaecologist considers the advice offered and will then seek such further advice (e.g., from a consultant psychiatrist, a physician, the patient's own practitioner) as he may think reasonable. When he has obtained

the best opinion available he then makes his own decision, and if he thinks it right he will carry out the abortion. The final decision rests with the consultant gynaecologist, and his is the responsibility for the operation. I cannot see how a sheaf of "certificates" can alter the place or the weight of this decision. Under the new proposals it would seem only a matter of time until patients will be referred for abortion with the necessary "abortion certificates" completed, and I for one have no intention of being reduced to a licensed abortionist.

Another aspect of the proposals I do not understand is the place of notification. At present all abortions in hospital are published on the operating lists. Is one to notify before the operation for permission, or afterwards so that one may be suitably punished if the indications did not fit in with the party line?

As the proposals stand at present, they do little for the poor woman wanting an abortion, little for the gynaecologist, and will have no effect on the demands for the services of the illegal abortionist. One is tempted to wonder if it is really worth the bother.—I am, etc.,

Derby.

A. F. DUSHBY.

SIR,—Whether or not one agrees with the points made, Professor Philip Rhodes's letter on abortion law reform (2 April, p. 859) is clearly a responsible contribution, and it is therefore particularly unfortunate that the references to psychiatrists in the final paragraph should carry a potentially offensive implication.

Good psychiatric-gynaecological/obstetric liaison is vital to the effective management of psychological disorders in pregnancy, quite apart from the question of termination. This certainly exists in my own clinical area; and in its interests elsewhere I hope that Professor Rhodes will feel obliged to explain his comments more fully.

No doubt more intensive social facilities would often be welcome, but to suggest that individual workers need to be forced to "take up their full responsibilities" is strongly to be deprecated.—I am, etc.,

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Glamorgan.

K. S. JONES.

### Smoking and Atherosclerosis

SIR,—You discuss in your leader (26 March, p. 755) the positive association between cigarette smoking and cardiovascular disease. We shall suggest that this is a particular example of a widespread phenomenon.

The sex- and age-distributions<sup>1</sup> of various categories of cardiovascular disease (International Abridged List, 1955: A85, B22, B25, B26—arteriosclerotic and degenerative heart disease—B27, B28, and B29) are all consistent with the view<sup>2</sup> that these several diseases have a disturbed-tolerance auto-immune aetiology. This interpretation is supported by the obliterative vascular changes that are observed in kidney homotransplants, and which have been attributed to a host-versus-graft reaction.<sup>3</sup> According to the autoimmune theory the cardiovascular disease process is initiated by a small number (generally less than 10) of somatic gene mutations in lymphoid stem cells.<sup>4,5</sup> These spontaneous gene changes initiate the growth of one or