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CORRESPONDENCE

Correspondents are urged to write briefly so that readers may be offered as wide a selection of letters as possible. So many are now being received that the omission of some is inevitable. Letters should be signed personally by all their authors.

Antenatal Diagnosis of Spina Bifida

SIR,—Further to your leading article (22 February, p. 414) we can add further reports of cases of spina bifida detected by *amniotic* α-fetoprotein (AFP) assay and, though serious closed lesions may be missed, the test is a good one.[1] We also agree that maternal serum AFP assay is currently able to detect at 16-20 weeks about one-third of cases of spina bifida.[1] You conclude that, in spite of being associated with at least 2% false positives, pregnant women with a risk of 1 in 20 of bearing a fetus with spina bifida can be identified, and general screening of all pregnancies by maternal serum AFP assay should now be considered. This is surprising since the assay technique is still subject to much inter-laboratory variation. it misses two-thirds of cases of spina bifida, and there are many practical and ethical problems still to be solved.

A minor revolution in obstetric practice would be necessary to obtain at 14-16 weeks serum from 800 000 pregnant women annually, especially in those areas where the majority do not book until later. Is it ethically justifiable to perform maternal serum assays on women who would never accept a termination of pregnancy, and should every woman undergoing this test be warned that amniocentesis would be indicated if the serum test is positive? Though unnecessary for the majority of anencephalics (detectable by ultrasound alone) 14 000 amniocenteses per year might be required, and it is doubtful whether sufficient equipment and trained technicians are available to allow preliminary ultrasound scan, without which the risks of amniocentesis may rise. Unwanted abortion currently results from amniocentesis in approximately 1-2% of cases[2] and consequently each year 140-280 normal, wanted fetuses might be jeopardized. It is also generally agreed that chromosome studies should be carried out on specimens of amniotic fluid taken for AFP assay, but this is not always possible with the resources at present provided. It would be quite impossible on 14 000 amniotic fluid specimens a year and mongols would be missed.

Though the value to individual women of antenatal diagnosis is undisputed,[3] population screening with a view to selective abortion is rather different and we must avoid the precipitate introduction of an unvalidated and costly screening programme based upon studies involving selected high-risk pregnancies which may not be representative of the general population of pregnant women. It is hoped that the enthusiasm created by your leading article will be channelled into well-controlled pilot studies of maternal serum assay and the establishment of regional teams providing specialized obstetric, radiological, genetic, and biochemical services directed to the improved antenatal detection of all birth defects.—We are, etc.,

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1 Harris, R., *et al.*, *Lancet*, 1974, **1**, 429.
2 *British Medical Journal*, 1974, **4**, 676.
3 Harris, H., *Prenatal Diagnosis and Selective Abortion*. London, Nuffield Provincial Hospitals Trust, 1974.

SIR,—Estimation of maternal serum α-fetoprotein (AFP) may prove to be of value in the clinical management of high-risk pregnancies, but the use of this test for antenatal mass screening for neural tube defects would represent such a fundamental change in obstetric practice that the implications of such a policy must be carefully evaluated before this procedure is introduced. We endorse the need for a scientific approach to the practical and ethical problems involved, but consider the rallying call in the last sentence of your leading article (22 February, p. 414) to be premature.

The need for careful investigation of the problems involved in measuring maternal serum AFP in order to define at the very least reliable estimates of test reproducibility, sensitivity, and specificity and the optimum time for the serum test is self-evident. In addition, public attitudes to the procedure need to be examined—for example, should patients be informed that blood is being taken for screening; should the benefits of compliance be stated; are there any hazards of compliance and if so what are they and should patients be informed?

Our concern that this screening procedure should be properly validated is further increased by the knowledge that a commercial kit for AFP radioimmunoassay is now available and doubtless others will soon be appearing on the market. Though these kits have a role to play in other branches of medicine, knowledge of their availability is certain to make it more difficult for obstetricians and chemical pathologists to resist the establishment of local screening programmes before their value has been properly established.

Hasty application of such tests will bring in its wake a great deal of unnecessary anguish (and possible risks to an otherwise normal pregnancy) for patients with false-