may closely simulate congenital heart disease, and the possibility of gross renal malformation with pulmonary hypoplasia should be

Immunological Control of Schistosomiasis

Sir,—Your recent leading article (12 August, p. 366) outlined some of the interesting current research into immunological aspects of schistosomiasis. May I comment upon several points which I believe to be relevant?

Both epidemiological and experimental evidence indicate that some resistance to superinfection is developed, but as yet we have little information on how the immune responses in man are affected by the pattern of exposure to infection. Are the responses in localities where transmission is more or less perennial different from those in areas where transmission is seasonal and often massive? Though heterologous immunity between different species of schistosomes has been demonstrated, it is not a universal phenomenon. Double infections in man with Schistosoma haematobium and S. mansoni are common in many areas. In the Transvaal S. haematobium and the bovine S. mattheei occur together in man with evidence of hybridization and often in company with S. mansoni.1 In Cameroon S. haematobium and S. intercalatum occur together in at least two localities, again with evidence of hybridization.1 In parts of West Africa, Morocco, and Iran S. haematobium and S. bovis are often transmitted by the same species of snail at the same sites, and though in these cases there is no evidence of cross-infection between the human and cattle parasites there is at the same time nothing to suggest that there is any cross-immunity either. The human parasites may be non-pathogenic in cattle but infections of S. mansoni in calves are capable of reaching maturity with the passage of viable eggs. Would it be an acceptable risk to introduce a pathogenic human parasite into an area where it might become established?

Schistosomiasis is a disease of rural areas, usually in countries with limited economic resources. The cost of schistosomiasis control based upon the use of expensive chemicals and drugs has proved to be beyond the means of many of these countries, but rural improvement schemes involving the proper use of water resources are vital to their economy. The incorporation of environmental control measures into such development projects could lead to beneficial and lasting effects on the incidence of not only schistosomiasis but also other parasitic diseases. The eventual control of schistosomiasis is the hands of those who suffer from the disease. They will need guidance on how this can be achieved, but if the advice which is given is incompatible with local economic development it is likely to go unheeded.3 Already some pilot environmental control schemes are showing promising results.15 If, as you suggest, the people in endemic areas are becoming more sophisticated and better prepared to tolerate parasitic infections this would seem to be an appropriate time to encourage the development of local environmental control schemes in association with the necessary elements of health education.

The construction of new irrigation schemes in endemic areas must include provision of adequate water facilities. Both domestic and recreational, and proper consideration must be given to the siting of accommodation for the work force. The cost of attending to these details will normally be only a very small fraction of the total investment in the whole scheme4 and the neglect of such installations must be condemned as highly irresponsible.—I am, etc.,

C. A. WRIGHT

Northampton General Hospital, Northampton


Ultrasound for Detecting Peristalsis

Sir,—Ultrasound offers a means of detecting postoperative recovery of bowel activity, and the following study, using a standard obstetric type of ultrasound device such as is used to detect the fetal heart beat, was designed to compare the diagnostic value of ultrasound with that of using a stethoscope.

Sixty-seven patients were observed daily with both stethoscope and ultrasound after they had had an operation. The period of observation in each case was five minutes, and the postoperative day on which peristalsis was detected by each method was noted. In all the patients bowel movements were detected ultrasonically before they were heard by stethoscope. Peristalsis was detected on average 24 hours before bowel sounds were heard, and peristalsis was followed in 64 cases by the passage of faeces within 48 hours (see Fig.).

The same technique was used to monitor a case of ileus treated with neostigmine by the method of Neely and Catchpole.1 The neostigmine infusion was stopped when bowel movement was detected by ultrasound, and this was five minutes before sounds were heard by stethoscope. The outcome was successful with a lower dose of neostigmine than would have been given if only auscultatory monitoring had been used.

A number of methods have been used to assess bowel motility, including intraluminal balloon manometry,2 pressure transducers,3 and radio telemetry pills.4 An external method of using microphones (phonendoscopy)5 produces results which can be difficult to