FIG. 1.

later plane S-T segment depression was still evident (fig. 1c) despite the presence of normal myocardial lactate extraction (+1.3 mg/100 ml) at this time. It could be considered that increased coronary arterial perfusion resulted from the trinitrin therapy and produced a wash-through effect, thereby preventing proper evaluation of myocardial lactate extraction status. However, after a further five-minute period spontaneous angina recurred, with further plane S-T segment depression (fig. 1d) and zero myocardial lactate extraction. Five minutes after a second trinitrin tablet had been given symptoms were relieved completely and this was associated with normal myocardial lactate extraction (+1.1 mg/100 ml) despite the persistence of plane S-T segment depression (fig. 1e). It was only after a further 20 minutes had elapsed, during which the patient remained asymptomatic with normal myocardial lactate extraction (+1.2 mg/100 ml), that the S-T segment regained its previously accepted normal J-point position (fig. 1f).—I am, etc.,

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Skin Reactions to Practolol

SIR,—As Drs. R. H. Felix and F. A. Ive point out in their letter (11 May, p. 333), the psoriasiform rash which appears to be associated with practolol is quite characteristic and easily recognizable. It may be of interest to note that the rash will sometimes be superimposed on psoriasis itself, which is such a common condition. In such cases it is easy to be tardy in diagnosing the drug rash since the picture suggests merely a worsening of the psoriasis and may easily be taken as a spontaneous occurrence.

I have recently seen two patients, both middle-aged women, who had been taking practolol in standard doses for a matter of a few weeks when the psoriasis became much worse; there were no special features in one case but in the other the worsening was acute and she developed generalized fiery erythema with annular peeling and involvement of the palms, which had not previously been affected. In both the exacerbation cleared rapidly without drastic measures within a week or two of the time when the drug was stopped. Both patients

had previously had extensive but stable psoriasis and there could be little doubt that the episodes were precipitated by the practolol.—I am, etc.,

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E.C.T. and Cardiac Arrhythmia

SIR,—Dr. S. M. Cannicott (31 August, p. 579) recommends routine β -adrenergic blockade for electric convulsion therapy. "Sympathetic stimulation" is invoked as a possible cause; I submit that parasympathetic overactivity, evident during a convulsion, may be an alternative cause of arrhythmia, despite premedication with atropine.

Dr. Cannicott also finds standard anxiolytics contraindicated on account of their anticonvulsant properties. Many patients are already on tranquilizers and antidepressants, and anaesthesia is frequently induced with a barbiturate, with no obvious inhibitory effect on the induced convulsion.

Dr. Cannicott may have demonstrated reduced pulse rates in his patients but he has yet to show a reduced mortality rate; β -adrenergic blockade is not without its own dangers, and since many patients submitted for E.C.T. are already on multiple-drug regimens, there may be further hazards from interactions.

I suggest that there is no case for unnecessarily complicating this very safe treatment until such time as controlled trials clearly demonstrate an improvement in the mortality rate.—I am, etc.,

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Malaria Transmission and Fetal Growth

SIR,—The article by Drs. J. D. Macgregor and J. G. Avery (17 August, p. 433) prompts me to make the following comments on malaria and fetal growth.

When pregnant women living in endemic malarial areas are unprotected by malarial chemotherapy maternal *Plasmodium falciparum* infection causes maternal anaemia,¹ placental parasitization,² and fetal growth retardation,³ all of which are more marked during first pregnancies. So it is hardly surprising that malarial eradication in the British Solomon Islands conferred a greater benefit on the babies of primigravidae than on those of multigravidae as judged by the changes in mean birth weights.

Turning to the issue of fetal growth retardation in malaria, one factor—namely, placental parasitization—has hitherto been put forward to explain it. But there is evidence which strongly suggests that maternal anaemia can also account for the prevalence of low-birth-weight babies in endemic malarial areas. In a study in Nigeria⁴ pregnant women who were initially anaemic from a variety of causes (haemoglobinopathies, malarial infection, folate deficiency) were treated with antimalarials, folic acid, and iron tablets. Blood transfusion was given in some cases. After more than six weeks' treatment the anaemia was successfully corrected in one group of

women, and in these cases the maternal packed cell volume (P.C.V.) was more than 30% at the end of their pregnancies. In the rest the P.C.V. was less than 30% when the babies were born. When other factors known to reduce fetal birth weight were excluded it was found that the incidence of small-for-dates babies differed significantly in the two groups. It was 35% in the non-anaemic group compared with 53% in the anaemic group, and in the latter a good correlation was found between maternal haematocrit and fetal birth weight. The relationship was such that a 2% drop in maternal haematocrit reduced fetal birth weight by about 100 g.

The point that maternal anaemia is associated with fetal growth retardation has therefore been made, but it requires confirmation. The malaria eradication programme referred to by Drs. Macgregor and Avery provides an excellent opportunity to do this. For this reason it would be of interest to know what the maternal haemoglobin (or P.C.V.) levels were at the end of pregnancy before and after malaria eradication.—I am, etc.,

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Schistosomiasis and Irrigation

SIR,—One of the third world's principal health problems and one which seems to present the medical profession working in affected countries with well-nigh insoluble problems is that posed by schistosomiasis.

In Africa and the Americas and in parts of Asia the most important source of dissemination of schistosomiasis results from the increasing use of irrigation and is therefore man-made. The intermediate snail host will not, as far as I am aware, breed in pipes and I have been surprised to note that the possibilities of carrying irrigation water in this way has received very little comment from the medical profession in affected countries. Such a system uses only a fraction of the land occupied by an open ditch system and therefore more land can be cultivated; it saves water in areas where there may be a scarcity of this commodity and enables water to be carried to the exact place where it is needed in the exact amount and for the exact time required for a particular crop. Loss by evaporation or permeation is avoided, man-water contact is reduced practically to zero, and the risk of infection correspondingly reduced.

While installation costs are certainly higher than for open ditch irrigation, this is in part offset by savings on cultivatable land, water used, routine control measures, and medical services, as well as by increased individual productivity. When an irrigation system is installed it is intended to be a project lasting for some centuries, and it would be right and proper, therefore, to spend more on the capital outlay in order