up to 48 hours after the infarction, less than 10 per cent of myocardial infarct patients still have increases 96 hours after the infarct (4). There is no indication in the report of Loebel and Robins that they studied recent onset acute patients.

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## HALOPERIDOL IN THE TREATMENT OF STUTTERERS

DEAR SIR,

Having read the letter from P. T. Quinn and E. C. Peachey, University of New South Wales, Australia, on haloperidol in the treatment of stutterers (1), we would like to convey some further information.

We have followed-up nine of the 12 patients who originally received haloperidol in our trial (2). More than three years after haloperidol was taken, it was found that fluency alone remained significantly improved; the other two measures, repetitions and interjections, though much improved failed to show significance or improvement.

Side effects were a serious problem: orphenadrine controlled extrapyramidal side effects but depression and drowsiness occurred in more than half the patients. The abrupt withdrawal of medication brought about some subjective and objective worsening and the question of maintenance therapy needs to be considered further.

Imipramine taken with haloperidol reduces its efficacy but subsequently the value of flupenthixol has been explored, producing good results with minimal side effects.

It seems highly likely that the more severely handicapped, i.e. those who are slow and show tic-like movements, may have some biochemical lesion in the basal ganglia (3); this would account for their response to haloperidol and flupenthixol. To clarify this we are shortly undertaking a double-blind cross-over trial of diazepam and flupenthixol.

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## TARDIVE DYSKINESIA

DEAR SIR,

We should like to comment on Dr. George M. Simpson's letter on the subject of tardive dyskinesia published in the *Journal*, May 1973, **122**, 618.

Recently a survey has been carried out of all psychogeriatric patients (aged 65 and above) at the St. Louis State Hospital to study the incidence of tardive dyskinesia and drug-induced neurological syndromes. In all, 160 patients were studied of whom 35 patients were noted to have tardive dyskinesia. In view of Dr. Simpson's interesting observation that female patients with Eastern European Jewish background may be more liable to develop tardive dyskinesia when exposed to neuroleptics, we studied the ancestry of our 35 patients of whom 30 were females and 5 males. Only 2 were Jewish (1 male and 1 female), 31 patients were Caucasian, 1 Chinese and 2 Negroes. Of the Caucasian patients 1 was of Austrian descent (female), 1 of Polish descent (female), 3 of Irish descent (1 male, 2 females), 1 of Italian descent (male), 2 of German descent (both females), 1 of English descent (female), 1 of Russian descent (male), 1 of Bohemian descent (female). The rest of the patients were third or fourth generation Americans born in the United States, and no detailed information of their ancestry was available. Taking into