the literature, there is no mention of exacerbation by anticholinergic agents.

The phenomenon of "delayed-onset dystonia" has been reported by Burke *et al* (1980): eight cases of persistent dystonia appeared years after non-progressive cerebral insults, including perinatal anoxia, trauma, and cerebral infarction. There was no history of neuroleptic treatment. It is interesting to note that the patient reported by Cooper *et al* had a history of prematurity, two perinatal anoxic episodes, epilepsy, and a focus of left temporal spike waves on the EEG.

The brain damage may have acted as a predisposing factor for the development of tardive dystonia in this patient. Another possibility is the occurrence of delayed-onset dystonia in a patient on neuroleptic treatment. One of the diagnostic criteria for tardive dystonia is exclusion of secondary causes of dystonia (Burke *et al*, 1982). Delayed-onset dystonia is one which may easily have been overlooked.

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Nicotine and dementia

SIR: The results reported by Sahakian *et al* (*Journal*, June 1989, **154**, 797–800) on the effects of nicotine in patients with dementia of the Alzheimer type are interesting and clearly warrant further evaluation. We would however like to raise some methodological concerns.

Firstly, the inclusion of cigarette smokers is questionable. There is evidence that prolonged or repeated exposure to nicotine can cause a desensitisation blockade of the receptors (Wonnacott, 1987) and that, as a result, subjects who smoke regularly may be less sensitive to the effects of subcutaneous nicotine. In addition, the density of nicotinic receptors in the brain has been shown to be increased in brain tissue taken from habitual smokers (Benwell *et al*, 1988). Although the possible psychopharmacological consequences of the change in receptor density remains to be established, it seems reasonable to suggest that patients who are also regular smokers may not respond to systemic nicotine in the same way or to the same degree as non-smokers. Therefore, the apparent lack of response to the drug in some of the tests (e.g. the short-term memory test) may simply reflect the heterogeneity of the patient population used.

Secondly, there is wide intrasubject variability in performance on cognitive tests in demented patients. Since the effects of subcutaneous nicotine are of rapid onset it is feasible to test the patients before and after administration of drug or placebo at each session. Positive results with this experimental design would be of greater significance.

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Depression-dependent exacerbation of TD

SIR: I read with interest the case "Depression-dependent exacerbation of tardive dyskinesia" reported by Sachdev (*Journal*, August 1989, **155**, 253–255). The case is presented well, but I would like to draw readers' attention to previous literature on this topic.

Yassa *et al* (1983), investigating patients with affective disorder, found a prevalence of tardive dyskinesia (TD) of 41%, with affected patients being older than those without TD. Yassa *et al* (1987) went on to investigate patients being started on antidepressants. Of 50 patients, three developed TD, two improving on withdrawal of the drugs. They quote a number of authors who have reported both the presence of TD in patients on antidepressants (15 cases) and others describing affective disorder as an exacerbating risk factor for TD in other disorders.

I would support Sachdev in the assertion that current biochemical theories are contradicted by these cases and that new explanations will have to be found. I would add that the model would have to take account of possible predisposing factors (age, sex, previous neuroleptic use, organic damage,