Persistent akathisia associated with early tardive dyskinesia

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Summary

Two psychiatric patients developed moderate or severe oro-facial dyskinesia, and limb dyskinesia, at a relatively young age and within a year of starting antipsychotic drug-treatment. This early appearance of tardive dyskinesia was preceded by akathisia that had developed at the beginning of drug therapy and persisted, despite the reduction of their drug doses to maintenance levels. The possibility that persistent akathisia may herald the early onset of tardive dyskinesia, is discussed.

KEY WORDS: schizophrenia, parkinsonism.

Introduction

Tardive dyskinesia is a movement disorder associated with the administration of antipsychotic (dopamine antagonist) drugs and, as its name suggests, has been considered as a side-effect of late-onset. It is characterized by oro-facial and limb dyskinesia. Akathisia is a syndrome of motor restlessness also related to antipsychotic medication and usually described as an acute, dose-related phenomenon. In our recent study (Braude, Barnes and Gore, 1983) of akathisia developing during the in-patient treatment of acute psychiatric patients, the condition was invariably ameliorated by a reduction in drug dose. This finding is in accord with the clinical literature on akathisia which suggests that dosage reduction is the only consistently effective treatment strategy (Hodge, 1959; Raskin, 1972; Van Putten, 1974). In the two patients described here, akathisia persisted despite a reduction in the dose of their antipsychotic medication, from high doses of oral drugs during hospital admission to maintenance doses of depot preparations. This persistent akathisia heralded the early appearance of tardive dyskinesia.

Case 1

A 32-year-old unemployed single woman was

admitted to hospital in July 1981 and diagnosed as suffering from a schizophrenic illness. This was the first occasion that she had been prescribed antipsychotic medication, although there was evidence that psychotic symptoms, principally delusions, had been present for several years. She was treated initially with oral chlorpromazine to a maximum dose of 500 mg per day. Following a test dose of fluphenazine decanoate (Modecate), 12.5 mg i.m., she was started on regular injections of this depot drug, 37.5 mg i.m. every 3 weeks. Within a few days of the first injection she complained of an inability to keep her legs still and the need to pace up and down persistently. Her feelings of restlessness were most distressing when standing, when she would rock from foot to foot, or walk around, to gain respite. Myoclonic jerking of the feet was also observed. These signs and symptoms are characteristic of severe akathisia according to diagnostic criteria derived from our recent study (Braude *et al.*, 1983). However, only minimal signs of parkinsonism were present; rating 0.4 on the Simpson and Angus (1970) Extrapyramidal Rating Scale (EPRS). There was no evidence of tardive dyskinesia. She was treated with procyclidine, 5 mg tds, for 4 weeks without benefit.

She was discharged to outpatient care in November 1981. Despite a further course of treatment with procyclidine, 5 mg bd, her akathisia persisted unchanged. The condition remained severe and distressing, and proved to be a profound social handicap as she was unable to tolerate standing still for even the shortest periods of time. By February 1982 she had developed moderate oro-facial dyskinesia, according to the videotape rating technique for tardive dyskinesia described by Barnes and Trauer (1982). Six months later the oro-facial dyskinesia was rated as severe, and choreiform movements of all four limbs were present. Since discharge from hospital, her antipsychotic medication had remained unchanged, fluphenazine decanoate 37.5 mg i.m. every 3 weeks.

Case 2

A 37-year-old male welder was admitted for the first time in February 1981 with a full range of Schneiderian first-rank symptoms of schizophrenia. He was diagnosed as having paranoid schizophrenia and prescribed chlorpromazine to a maximum of 500 mg per day and trifluoperazine to a maximum of 30 mg per day. This was the first occasion that he had received antipsychotic medication. Within 10 days of starting drug treatment he developed moderately severe akathisia, manifesting fidgety leg movements while seated, rocking from foot to foot when standing and complaining of being unable to keep his legs still. Parkinsonism was also moderately severe, scoring 1-4 on the EPRS. There was no evidence of tardive dyskinesia at this time. Procyclidine was prescribed, up to 15 mg per day, which partially ameliorated his parkinsonism to a score of 0.8, but his akathisia was unaffected. The chlorpromazine and trifluoperazine were gradually withdrawn and replaced by fluphenazine decanoate 37.5 mg i.m. three weekly. However, his akathisia persisted unaltered. Four months after admission he was noted to have mild oro-facial dyskinesia. Two months later his oro-facial dyskinesia was rated as moderate, and dystonic movements of the legs had appeared. Over the following 6 months his depot medication was gradually reduced, so that by February 1982 he was receiving fluphenazine decanoate 25 mg every four weeks. The signs and symptoms of akathisia and the severity of his oro-facial and limb dyskinesia remained unchanged.

Discussion

By virtue of their age, the two patients described above might be considered to be at a low risk of developing tardive dyskinesia (Jus *et al.*, 1976; Smith and Baldessarini, 1980; Kane and Smith, 1982). However, within a year of starting antipsychotic drug therapy they had developed marked oro-facial dyskinesia and prominent limb dyskinesia. These abnormal movements were considered to represent tardive dyskinesia, although stereotyped, rhythmic movements occurring relatively early in drug treatment, and resembling tardive dyskinesia, have been observed by Gerlach (1979), and could be a source of diagnostic confusion. He labelled these phenomena 'initial hyperkinesia'. However, there is little evidence, at present, to support the claims that this hyperkinesia constitutes a phenomenologically distinct clinical entity, or may be distinguished from tardive dyskinesia in terms of response to drug treatments. Tardive dyskinesia itself lacks precise phenomenological description and, as generally applied, the term may encompass a wide variety of abnormal movements (Mackay, 1982; Barnes, Rosser and Trauer, 1983b). In the two patients described

here, oro-facial dyskinesia, which represents the core sign of any definition of tardive dyskinesia, was assessed using a rating method with established reliability and validity (Barnes and Trauer, 1982). Coexistent limb dyskinesia was choreiform in nature in one case, and dystonic in the other.

For both patients, their psychiatric histories and the presentation of their schizophrenic illness were not unusual, and the drug treatment administered was representative of current practice. Neither had family history of movement disorders, and on admission there had been no clinical evidence of neurological pathology, or systemic illness. Thus, the clinical features and management of these cases were not atypical. The only remarkable factor, common to both cases, was the presence of akathisia which had persisted despite drug dose reduction. Evidence from a number of clinical studies shows that akathisia and tardive dyskinesia can co-exist (Brandon, McClelland and Protheroe, 1971; Kennedy, Hershon and McGuire, 1971; Wojcik *et al.*, 1980; Mukherjee *et al.*, 1982; Barnes, Kidger and Gore, 1983). Such an association may appear paradoxical, as akathisia is an acute, dose-related condition which tends to occur at the start of antipsychotic drug therapy and is readily reversible with a reduction in drug dosage, while tardive dyskinesia usually emerges during stable, maintenance medication or on drug withdrawal, and is more common in older patients.

The cases reported here suggest one possible explanation for the association of these two conditions, namely that acute akathisia which persists with maintenance antipsychotic medication may be a specific antecedent of early tardive dyskinesia. There are isolated clinical reports in the literature that lend support to this view. Based on their clinical observations, Chouinard *et al.* (1979) considered that a patient with tremor or akathisia, which they described as 'hyperkinetic' symptoms of parkinsonism, was more likely to manifest tardive dyskinesia than a patient with 'hypokinetic symptoms' such as akinesia and rigidity. DeVaugh-Geiss (1982) elaborated on this idea, suggesting that, in certain patients, akathisia can represent a stage in a progression from hypokinetic parkinsonism to the development of oro-facial and trunk and limb dyskinesia. Munetz and Cornes (1982) discussed this hypothesis, and speculated further on the relationship between the two conditions. They suggested that tardive dyskinesia may be preceded by a form of akathisia where only the motor signs are present; the subjective, distressing aspects originally in evidence, having progressively diminished. Simpson (1977) has also commented on the absence of subjective symptoms in chronic akathisia, and, in addition, has noted the existence of a late-onset type of akathisia which he considered to be 'frequently associated' with tardive dyskinesia.

Braude and Barnes (1983) have proposed that late-onset akathisia, emerging during chronic antipsychotic drug treatment, might indicate the development of 'covert' dyskinesia, trunk and limb dyskinesia being manifest on subsequent drug dose reduction. Inherent in all these reports is the notion that akathisia may be a forerunner of tardive dyskinesia when it occurs in a context other than the commonly observed association with a relatively short period of elevated drug dose.

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