made of her treatment by an independent observer. The recording showed a clear synchronous centrencephalic spike and wave episode lasting 54 seconds immediately after electrical stimulation. Thereafter the recording showed diffuse slow activity, often in dysrhythmic runs. Approximately 45 seconds later there was a return of muscle potentials on the record, and a period of small muscle twitches and movements were seen. However, there were no further concomitant cerebral epileptic events after the initial grand mal fit. The recording continued for 380 seconds after electrical stimulation.

Motor restlessness and uncoordination are recognised features of the post-ictal syndrome (Livingston *et al*, 1980). In the absence of any epileptic phenomena on the EEG this seems a more likely explanation than that she experienced a second seizure.

The difficulty of differentiating by observation alone the motor restlessness of a post-ictal syndrome from a second epileptic seizure may not, of course, necessarily explain the clinical phenomenon observed by James & Simpson. Certainly, if spontaneous second seizures are to occur, they would be expected to occur early in treatment as the fit threshold rises during a course of ECT (Sackeim *et al*, 1986). If a second seizure occurs after ECT, it is important to consider possible precipitants such as drugs with convulsant properties, e.g. tricyclic antidepressants and phenothiazines. The woman in the reported case was drug-free, and thus we wondered about other precipitants such as hyperuraemia or menstruation (Hopkins, 1983).

The value of routine EEG monitoring of ECT is a matter of dispute, but it is unlikely that such clinical phenomena will be understood properly without simultaneous EEG monitoring.

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## Difficulties in Assessing Tardive Dyskinesia

SIR: Tardive dyskinesia (TD) is a major side-effect of long-term administration of neuroleptics. It is important therefore that its incidence, prevalence, and response to treatment are accurately determined. Such accuracy, however, is bedevilled by difficulties in assessment, and we report a further example of this difficulty.

As part of an (unpublished) open study of the efficacy of a novel psychotropic drug (Glaxo, GRC507/75) in the treatment of TD, ten chronic schizophrenic in-patients with TD were assessed before treatment using the Abnormal Involuntary Movements Scale (AIMS) (US Department of Health, Education and Welfare, 1976) and immediately afterwards were videotaped for one and a half minutes in a standardised way (Kidger *et al*, 1980). The live and video ratings were made by two different psychiatrists; the video rater was unaware that the ratings were before treatment.

As assessed by the AIMS global rating, six patients had mild and four moderate TD; two patients on video had no evidence of TD. The AIMS subscale found that all patients had orofacial and five distal dyskinesia, while the video ratings found only six with orofacial and four with distal dyskinesia.

Videotaping of patients with TD has obvious advantages, especially when carried out serially, as the order of presentation to the rater can be randomised. The present results suggest, however, that it may be less sensitive in mild and moderate cases than the more detailed assessment by AIMS of the 'live patient'. Indeed, our impression was that patients 'froze' in front of the camera. The main drawback to the AIMS is that it does not allow for a quantitative assessment of frequency, amplitude, or duration of movements (Barnes, 1984).

Agreement between live and video ratings was higher in two previous studies (Barnes & Trauer, 1982; Firth & Ardern, 1985). In the former study, however, the patients were unaware of the reasons for videotaping; in the latter, at least one movement was rated 'moderate-severe' in the Abbreviated Rockland Rating Scale. However, evaluation of methods of treatment must focus on patients with mild TD who give informed consent to the study.

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## Premorbid Adjustment Scale as a Prognostic Predictor for Schizophrenia

It is difficult to formulate a medium or long-term prognosis following the onset of schizophrenia. Standard criteria such as those of type of onset (acute or insidious), predominant symptoms (Huber *et al*, 1980), or the diagnosis of subtype do not correlate satisfactorily with outcome (Bland *et al*, 1976). In the last decade some authors cited the importance of premorbid factors such as socio-familial relationship, adaptation to school, or pseudo-psychopathic or toxicophylic behaviour (Strauss & Carpenter, 1977; Wittenborn *et al*, 1977) in the outcome of these patients, with a marked relationship having been noted between these factors and personal autonomy in later years.

Cannon-Spoor *et al* (1982) recently developed the Premorbid Adjustment Scale (PAS) to evaluate aspects such as withdrawal, social relationships, independence, scholastic performance, and ability to establish socio-sexual relationships. All patients are rated on five sub-scales corresponding to childhood, early adolescence, late adolescence, adulthood, and general, with a total of 26 items. These authors suggested that a high score on this scale may detect patients likely to become chronically hospitalised or at high risk for readmission.

We studied a sample of 30 patients (11 in-patients, 19 out-patients) presenting schizophrenic disorders (DSM–III criteria) independent of subtypes (14 males and 16 females; mean age = 24.9; age range = 17–34). The rating scale was administered retrospectively in the majority of cases by five raters with the patient and his family separately (the minimum correlation between pairs of raters was $r = 0.76$ ($P \leqslant 0.0001$)). The minimum duration of illness was 2 years (mean = 3.6). All were admitted to hospital at least once (mean = 3 admissions). Outcome was evaluated using Strauss & Carpenter's scale (1972), which covers duration of time spent outside hospital, social contacts, and time usefully employed over the last year, as well as absence of symptoms in the past month.

Correlation between the two scales, PAS average and Strauss, was statistically significant ($r = 0.76$, $P \leqslant 0.001$ for the average score). Similar results were seen on comparing PAS sub-scales with Strauss & Carpenter's outcome scale: childhood, $r = 0.49$ ($P \leqslant 0.01$); early adolescence, $r = 0.69$ ($P \leqslant 0.001$); late adolescence, $r = 0.61$ ($P \leqslant 0.001$); adult, $r = 0.73$ ($P \leqslant 0.001$); general, $r = 0.75$ ($P \leqslant 0.001$).

Ten patients had been rated as having an acute onset of less than three months, and 20 an insidious onset. Correlation between the two scales was not significant in the acute onset subgroup ($r = 0.59$), while the insidious onset sub-group showed a significant correlation ($r = 0.67$; $P \leqslant 0.001$).

PAS appears to be a valuable and useful aid both in daily clinical practice and for further studies investigating the factors related to schizophrenia and its outcome.


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