Intercital behaviour in temporal lobe epilepsy

Over the years our concepts of the types and frequency of interictal psychopathology associated with epilepsy have changed. In the last century the dominant view was that both the intellect and the personality deteriorated on a genetic basis—a concept influenced by Morel's degeneracy theory of mental disorder. At the turn of the century the concept of the "epileptic personality" gradually gained ascendency, only to recede with the studies of Lennox showing that most epileptic patients were normal mentally. These findings have been confirmed by modern epidemiological studies which suggest that only one third of patients have recognisable interictal psychological disorders, a prevalence similar to that in patients with other chronic cerebral disorders.

In 1948 Gibbs et al reported that patients with psychomotor seizures had a significantly higher incidence of psychopathology than patients with other types of seizures, and thus entered the era of "psychomotor peculiarity." This view implies that patients with psychomotor seizures or temporal lobe epilepsy are particularly susceptible to personality or psychiatric disorders of various types. The concept has been fuelled by a wealth of experimental evidence showing that the importance of the limbic system and temporal lobes in the emotional and behavioural life of animals and man. There is also much interest in some of the overlapping psychopathological manifestations of "complex partial seizures" and some psychiatric disorders such as schizophrenia in which the limbic system has also been implicated.

In the last 35 years an enormous and largely conflicting number of publications have accumulated on this subject. With notable exceptions the main proponents of the concept have been psychiatrists, while neurologists have been more sceptical. Stevens recently summarised nine controlled studies, including three of her own, using either objective or projective psychological tests or blind psychiatric interviews which failed to show any increase in psychopathology in patients with temporal lobe epilepsy compared with matched patients with generalised seizures or focal non-temporal lobe epilepsies or control populations.

The latest entrants to the debate have been Bear and Fedio, who concluded that everyone was using the wrong tools for the task, and devised their own scale of rating behaviour and personality, based on clinical observation. They showed that 27 outpatients with temporal lobe epilepsy had a different personality profile from patients with neurological disease and normal controls (as well as showing differences between right and left sided temporal lobe epilepsy). Recently Bear et al reported that 10 hospital inpatients with temporal lobe epilepsy had a significantly different personality profile from 10 matched patients with generalised or focal non-temporal lobe epilepsy. The former were characterised in particular by circumstantiality, deepened affects, and an interest in religion and philosophy. This study was undertaken in a psychiatric hospital, but surprisingly the authors do not give the psychiatric diagnosis in their epileptic groups, even though they imply that the reasons for admission in two such groups are usually different. Mungas showed that a large percentage of the variation in character traits on the Bear and Fedio rating scale can be accounted for by the presence or absence of psychiatric illness in a neurological clinic. Hermann and Riel compared 14 matched patients with temporal or generalised epilepsy. The former showed important differences only in four of the 18 traits on the Bear and Fedio rating scale—increased sense of personal destiny, dependence, paranoia, and philosophical interest. Some of the trends were in the opposite direction to those predicted. These inconclusive data are illustrative of the conflicting literature on temporal lobe epilepsy and behaviour.

It is surprising to a neurologist that striking differences in personality should be expected to be shown in studies of such relatively small numbers of patients. After all, temporal lobe epilepsy is very common. In a retrospective study of 666 patients with temporal lobe epilepsy recruited from all the departments of a district general hospital 57% were mentally normal and only 6% had severe psychological disorders.

What reasons are there for the continuing controversy in this difficult subject? Firstly, the terminology is confusing dur
to a looseness or absence of definition of terms. Psychomotor seizures evolved imperceptibly into temporal lobe epilepsy, then complex partial seizures, and now limbic epilepsy. These terms are not synonymous but have been used interchangeably. Possibly there are limbic discharges in generalised seizures, which complicates the terminology and the issues further. Precise definition and measurement of psychopathology are also important to distinguish between personality disorders and other psychiatric states, as emphasised by Trimble and Perez.17

Secondly, there is often a sampling bias. The high frequency of temporal lobe epilepsy in adult clinics is not widely appreciated. Three major studies of the application of the International League Against Epilepsy seizure classification to adult neurologic clinics in different countries suggest that up to three quarters of the patients have partial seizures.18 Most of these will have temporal lobe epilepsy.11 Finding a high incidence of temporal lobe epilepsy among psychiatric patients with epilepsy may not be of great importance since it may simply reflect the incidence of this type of epilepsy in adult clinics. Thirdly, the electroencephalographic findings have tended to confuse as much as to illuminate the subject. Many authors include temporal spiking in their diagnostic criteria, some include other (for example, slow wave) temporal phenomena, and others avoid using electroencephalographic criteria. It should not be forgotten that “all that spikes is not fits,”19 and that in some psychiatric disorders unassociated with epilepsy temporal spikes or slow activity have been noted.20 The latter observation, however, has reinforced the search for the temporal lobe basis of the psychopathology associated with temporal lobe epilepsy.

Finally, though it is widely recognised that many factors contribute to psychological disorders in epilepsy10 22—including brain damage, long term drug treatment, and powerful psychosocial influences—such factors are frequently not controlled for in studies of temporal lobe epilepsy and psychopathology. This is especially true of anticonvulsant treatment. Patients with partial seizures are more difficult to treat than those with generalised seizures,23 24 which is one reason why temporal lobe epilepsy is seen frequently in adult clinics. Rodin et al25 26 showed that such patients end up taking more drugs than those with other types of seizure. There is increasing evidence that such polytherapy has an adverse effect on mental function.21 26 27

Much psychopathology in temporal lobe epilepsy may be due to the interaction of multiple factors. Patients with partial seizures, especially when this is associated with brain damage, tend to have more frequent attacks, take more drugs, and suffer more adverse psychosocial stresses than patients with generalised seizures. More effective treatment of epilepsy at the onset may be the way to prevent chronic poorly controlled epilepsy with its attendant risk of chronic psychopathology.44

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Amniotic band syndrome

Amniotic bands are an unusual and ill recognised cause of fetal malformation.1 Their exact incidence is unknown, but reported series suggest they occur in between one in 1200 and one in 15 000 live births.2 Clustering of cases has been recorded.3 They are commoner in early pregnancy.4 The relation between the bands and the fetal malformations with which they are associated remains controversial.

Morphologically no real advance has been made since the pathological features were summarised by Ballantine in 1902.5 He concluded that amniotic bands and adhesions occur in relation to the head, abdomen, and back of the fetus, between the fetus and the umbilical cord, and between one part of the fetus and another. They may be associated with malformation of the limbs. Bands may occur between one part of the amnion and