

lies in inadequacy of method or simply inconclusive results: should one treat mild hypertension, although the (very large) MRC mild hypertension trial did not detect any clear effect on mortality?

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Ordering thoughts in thought disorder

SIR: McGrath proposes a hypothesis suggesting the involvement of frontal lobe dysfunction in schizophrenic thought disorder (*Journal*, March 1991, **158**, 307–316). He argues mainly from the similarity between the pattern of language deficit in thought disorder and the pattern of cognitive-behavioural deficit in frontal lobe syndrome.

One further link between thought disorder and frontal lobe dysfunction is their association with eye tracking disorder. Among other symptoms and signs, thought disorder has one of the strongest associations with eye tracking disorder (Keefe *et al.*, 1989). Eye tracking is controlled by a number of brain areas. One such area, thought to be affected in schizophrenia, is the frontal eye field (Fukushima *et al.*, 1990), located in the prefrontal cortex.

Thought disorder encompasses a variety of phenomena. The proposed "prefrontal-basal ganglia loop" may account for only part of the diversity. Apart from the basal ganglia and the thalamus, the prefrontal cortex has reciprocal connections with the posterior association cortex, and limbic structures such as the hippocampus and the amygdala (Fuster, 1987). For example, one such area, the temporal cortex, is important in relation to category knowledge (e.g. Damasio, 1990). Categorisation is affected in some patients with thought disorder.

It seems plausible to propose that many prefrontal related loops (a distributed network radiating from the prefrontal area) including for instance, a prefrontal-temporal pathway, are affected in schizophrenic thought disorder. The different aspects of thought disorder (loosening of association, poverty of content of speech, etc.), may reflect differential dysfunction of these loops. It is important that studies relating thought disorder to brain mechanism take into account the various dimensions of thought disorder (rather than a global thought disorder measure), and study simultaneously a number of brain areas in order to capture some of the more subtle interactions.

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KEEFE, R. S., SIEVER, L. J., MOHS, R. C., *et al.* (1989) Eye tracking, schizophrenic symptoms, and schizotypal personality disorder. *European Archives of Psychiatry and Neurological Sciences*, **239**, 39–42.

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SIR: McGrath's review (*Journal*, March 1991, **158**, 307–316) omitted mention of cognitive behaviour therapy strategies which are attracting increasing attention in the management of schizophrenia (e.g. Perris, 1989). The stages of therapy would appear to be rapport building, examination of the antecedents of psychotic breakdown, weighing of evidence, and reality testing, with generation of alternative hypotheses using a normalising rationale (Kingdon & Turkington, 1991). Supplementary techniques include reduction of the emotional investment of psychotic symptoms and inference chaining to identify underlying schemata. These techniques seem to be most effective in conjunction with standard management regimes in the setting of a comprehensive psychiatric service. We describe the first reported use of these techniques in a thought-disordered hebephrenic patient.

Case report. A 22-year-old single man presented himself to our psychiatric reception area in a floridly thought-disordered state, with prominent paranoid delusions and incongruity of affect. These symptoms had worsened over a two-week period, during which time his sleep became progressively disturbed. He had experienced two schizophrenic episodes during the previous four years, which were treated with neuroleptics and cognitive therapy, and had returned to work on both occasions. No underlying disorder or history of drug abuse was detected. He was admitted, and treated with neuroleptics. Cognitive therapy sessions were included in his management programme. Rapport was established early but progress was impeded by intermingling of themes and derailment, which at times lapsed into incomprehensibility. He gave informed consent to the videotaping of an interview for teaching purposes. Review of this demonstrated that four clear themes were present. These were: references to a road traffic accident that he had witnessed, his mother's ill-health, concern about somatic symptoms of anxiety, and finally intermittent references to the videotaping process itself as being a form of experimentation. In relation to the latter, he commenced the interview by referring to his half-Jewish parentage and later