

ECT in 1991 were examined. There were 51 women and 22 men. The average age was 63.3 years. ECT was given according to the recognised advice in the UK (Royal College of Psychiatrists, 1989). A total of 646 applications of ECT were given (an average of 8.85 per course). Following stimulation, 295 fits lasting longer than 25 seconds occurred; however, 315 fits of less than 25 seconds and 36 complete failures to fit were noted. A consultant anaesthetist and clinical assistant on regular attachment gave the anaesthetic agent which was always methohexitone and suxamethonium. Seizures were observed and timed by the psychiatrist and nurse in charge. No variables such as the patient's age and sex, the concurrent prescription of drugs with anticonvulsant properties, and the machine setting (ECT1 or ECT2) were found to influence seizure duration.

At this point a new Ectron Series 5 machine was purchased and used in the ECT department. This machine has a larger electrical output. A repeat prospective audit was performed to see what effect this new machine would have on seizure length. The treatment of 30 patients was audited. There were 24 women and 6 men with an average age of 54.6 years. A total of 217 applications of ECT were given (an average of 7.2 per patient, per course): 169 applications resulted in fits of greater than 25 seconds, 46 in fits of less than 25 seconds, and 2 in no fit at all. The average length of seizure induced on each application increased from 25.6 seconds in the first audit, to 36.3 in the second audit (standard deviation of the difference of the means = 2.55), and a comparison using the two-tailed *t*-test gave this a *P* value of less than 0.001.

There was no statistical difference between the two groups of patients in sex ratios, or in the proportion of patients receiving drugs with anticonvulsant side-effects. There was, however, a difference in the average age: in the original sample this had been 63.32 years but in the follow-up audit was 54.6 years (standard deviation of the difference of the means = 3.54). This was a clear-cut difference, and using the two-tailed *t*-test had a *P* value of less than 0.01. It is also interesting to note that in the second audit it was found that there was a significant negative correlation between age and length of seizure. This was analysed using the rank order of correlation (Spearman): the rho value was -0.478 , giving a *P* value on a one-tailed *t*-test of less than 0.02. Looking at the data of the second audit more closely, it was apparent that the average seizure length was greater for all age groups except for the one patient aged over 80 years. It therefore seems unlikely that the overall increase in successful convulsions was simply due to an age difference between the two samples.

It seems probable that the higher proportion of patients having ultra-short convulsions prior to the introduction of the new ECT machine was due to the use of the Ectron Series 3 machine. This produces a relatively low electrical output, which is likely to be below the stimulation threshold in a significant proportion of subjects, and should be replaced by newer models.

Here is an example of the completion of a cycle of audit and the successful introduction of a change in patient management.

ROYAL COLLEGE OF PSYCHIATRISTS (1989) *The Practical Administration of Electroconvulsive Therapy*. London: Gaskell.

STEPHEN ARNOTT
ELLEN WILKINSON

Glenside Hospital
Stapleton
Bristol BS16 1DD

ECT in schizophrenia: need for reappraisal?

SIR: Introduced for the treatment of schizophrenia, the use of electroconvulsive therapy (ECT) has declined over the past few decades in the West (Weiner, 1989). Its less dramatic response in alleviating symptoms and the absence of long-term superiority over neuroleptics have been highlighted in literature. Coupled with this, the negative attitude towards ECT in the society and among physicians has resulted in a reduction in its prescription.

Currently, its use in schizophrenia remains restricted to acute presentations, especially with catatonic and affective symptoms (Weiner, 1989). Physicians who employ this treatment modality often regard it as a last resort when the disturbance is unmanageable, and neuroleptics used sequentially or in combination have failed. Fortunately in India, a more liberal use of ECT in schizophrenia exists (Shukla, *Journal*, December 1981, 139, 569–571). This may be due to a positive attitude among psychiatrists (gained through experience) and benefit in terms of cost and reduced admissions. In addition, the sociocultural context and its implications on patient consent (Jacob & Rajan, *Journal*, April 1991, 158, 576) does not impede its usage. In our experience, ECT employed with concomitant neuroleptic medication in the treatment of schizophrenia results in a decrease in symptoms and an improvement in functioning in a significant number of individuals. Improvement is seen in positive psychotic attributes which seems to be independent of depressive manifestations. We note an accelerated reduction in symptoms when ECT is employed in combination with neuroleptics, even in chronic patients. The rapidity of response

with the attendant reduction in cost (in terms of subjective distress, burden on the family, and finance) and shortened hospital stay justifies its use. Maintenance neuroleptics are employed to sustain the improvement gained. The average number of ECTs required are greater than the amount employed for depression. We also use it as an early treatment option in patients with acute psychotic episodes and in neuroleptic non-responders. The difficulty in identifying the responsive subgroup among chronic schizophrenic patients necessitates a trial for those individuals who remain symptomatic on adequate neuroleptics. The lack of long-term side-effects, the lowered dose of concomitant antipsychotics, reduction in hospital stay, and its cost-effectiveness make it an attractive treatment alternative.

A careful review of Western literature also supports many of these inferences (Taylor & Fleminger, 1980; Brandon *et al*, *Journal*, February 1985, **146**, 177–183; Dodwell & Goldberg, *Journal*, May 1989, **154**, 635–639; Christison *et al*, 1991). However, their emphasis seems to be lost amidst the prevalent negative point of view. The general reduction in the use of ECT in the West appears to have resulted in an inadequate evaluation of its potential. Results from studies of few patients (fewer number of ECTs) without adequate maintenance neuroleptic medication have been 'generalised' to suggest that the treatment is not useful in the management of schizophrenia. Considering the safety of the procedure and the significant non-response to antipsychotics, a trial of ECT in schizophrenia would have to be actively contemplated. There is a definite need for a reappraisal of its potential and of attitudes among physicians towards this modality of treatment.

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WEINER, R. D. (1989) Electroconvulsive therapy. In *Comprehensive Textbook of Psychiatry* (5th edn) (eds H. I. Kaplan & B. J. Sadock). Baltimore: Williams & Wilkins.

P. J. SAJU
K. S. JACOB

Department of Psychiatry
Christian Medical College
Vellore 632002, India

Parental age in schizophrenia in a case-controlled study

SIR: Several studies have shown that both maternal and paternal ages at the birth of their child are

increased for schizophrenics, even leading to the assertion that it is one of the few areas of schizophrenia research in which there is an impressive concordance of results (Kinnell, *Journal*, February 1983, **142**, 204).

In previous studies (Hare & Moran, *Journal*, February 1979, **134**, 169–177; Kinnell, 1983) conclusions were derived after comparing the age of mother and father of patients, with those of a control population. The way the control population was constructed varies among studies but in no case was there a case-control method, and we have shown previously (Fañanás *et al*, 1989) that a proper stratification of the control population is a key issue in making appropriate comparisons. We report the results of a study carried out in Barcelona, where the controls were selected according to the sociodemographic variables of the patients in a case-control method.

The results refer to a sample of 120 patients and 176 controls (see Fañanás *et al*, 1989 for a description of the two populations and the method) and are clear cut: there is no significant difference between patients and controls in either the age of the mother (mean = 29.94 years, s.d. = 6.07 for patients, and mean = 29.61 years, s.d. = 6.12 for controls; Student's $t=0.46$, $P=0.64$), or the age of the father (mean = 33.47 years, s.d. = 7.48 for patients, and mean = 33.15 years, s.d. = 6.88 for controls; Student's $t=0.38$, $P=0.71$).

Heterogeneity is widely accepted in the understanding of schizophrenia, and many papers have addressed the question by analysing subgroups of patients according to several variables (family history, age of onset, sex). When splitting our sample into two groups according to these criteria (presence or absence of family history of schizophrenia, early or late age of onset, female or male) no divergence was observed in the age of either parent when compared with controls.

In this study, the age of the parents is shown to be independent of the presence of schizophrenia and of the variables that may define biological subgroups.

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JAUME BERTRANPETIT
LOURDES FAÑANÁS

Laboratory of Anthropology
Faculty of Biology
University of Barcelona
Diagonal 645, 08028 Barcelona
Spain