

1976 in connection with another study⁷ and had given them quite detailed explanations of what the treatment involved, yet several of these were adamant that they had never been given any explanation. It might, therefore, be beneficial to patients to give them a second explanation of the treatment after they have completed the course and are symptomatically improved.

It is worrying that two patients from the 1976 sample died during a course of ECT. Both were elderly females, had preexisting cardiac disease, were taking tricyclic antidepressants, had longer than usual courses of ECT, and died of myocardial infarctions which were clinically silent until death. It is not possible to draw firm conclusions from two cases, but they raise the question whether in such "at risk" patients ECT and tricyclics should be given together.

Finally, we would like to emphasize the great trust that patients put in doctors. The majority of subjects in this study were more than happy to leave all decisions about their treatment to a doctor. There was hardly any concern about consent procedures being inadequate. This is perhaps best illustrated by two patients who misunderstood the initial appointment letter and came fully prepared to commence a course of ECT. Neither had been near the hospital for nine months and both were quite symptom free.

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The Cognitive Side Effects of Electroconvulsive Therapy^a

Discussion of Part VI

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It is a well-documented fact that electroconvulsive therapy (ECT) produces cognitive impairment. This type of side effect has been a major concern of both practitioners and their patients since the treatment was first introduced in 1938. Interest in finding ways to reduce these cognitive deficits has been at the core of research efforts in more recent years, and modification of the parameters of ECT, e.g., modality, stimulus waveform, and dosage, have met with apparent success. Research into the specificities of these cognitive deficits, and how they relate to the parameters of treatment, will not only aid us in dealing with the deficits directly, but will enable us to better understand how the treatment affects a wide range of neuropsychological functions, thereby providing data on the possible mechanisms of action of ECT as well as on the neuropsychological aspects of depression.

The papers presented in this session are primarily devoted to further exploration of the ways in which the parameters of treatment relate to cognitive dysfunction. Research advances in this area have pointed to the fact that the associated side effects of ECT are not general, but specific. They are specific to the direct effects of the stimulation, to the characteristics of the behaviors being studied, and to the time at which these assessments are made.

A wide range of research interests are presented. In some cases the data support previously reported findings, while in other cases the data are representative of new areas of study. I will briefly review the major findings in the area of ECT-related cognitive functions as they are presented in this session, and show, where possible, how these deficits relate directly to the parameters of the treatment.

The first major parameter to undergo study was that of electrode placement. It was clearly observed that the memory loss often associated with bilateral placement of electrodes was markedly reduced when the electrodes were placed on one side of the head (nondominant side). This reduction in cognitive impairment, with unilateral treatment, was primarily for verbal memory, although early studies suggested that nonverbal memory was similarly affected. The differential effects of treatment modality on verbal memory are a robust finding, which has held up through many experimental trials. We see from the data presented in this session that the differences between bilateral and unilateral electrode placement for verbal materials hold for the different stimulus waveforms (Weiner's study) and for low-dosage treatment (Sackeim's study).

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