
The Practice of Electroconvulsive Therapy

Recommendations for Treatment, Training, and Privileging

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et al. 1986b). The magnitude of the retrograde amnesia is greatest immediately after treatment. A few days after the ECT course, memory for events in the remote past is usually intact, but there may be difficulty in recalling events that transpired several months to years prior to ECT. The retrograde amnesia over this time span is rarely complete. Rather, patients have gaps or spottiness in their memories of personal and public events. Recent evidence suggests that the retrograde amnesia is typically greater for public information (knowledge of events in the world) than for personal information (autobiographic details of the patient's life) (Lisanby et al. 2000). The emotional valence of autobiographic events—that is, memories of pleasant or distressful events—is not related to their likelihood of being forgotten (McElhiney et al. 1995).

Usually, as time since ECT increases, the extent of retrograde amnesia reduces substantially. Older memories are more likely to be recovered. The time course for this shrinkage of retrograde amnesia is often more gradual than that for resolution of anterograde amnesia. In some patients the recovery from retrograde amnesia will be incomplete, and evidence has shown that ECT can result in persistent or permanent memory loss (Lisanby et al. 2000; McElhiney et al. 1995; Sackeim et al. 2000; Sobin et al. 1995; Squire et al. 1981; Weiner et al. 1986b). Owing to a combination of anterograde and retrograde effects, many patients may manifest persistent loss of memory for some events that transpired in the interval starting several months before and extending to several weeks after the ECT course. There are individual differences, however; some patients may experience persistent amnesia extending several years before ECT, although this effect is uncommon. Profound and persistent retrograde amnesia may be more likely in patients with preexisting neurologic impairment and patients who receive large numbers of treatments using methods that accentuate acute cognitive side effects (e.g., sine wave stimulation, bilateral electrode placement, high electrical stimulus intensity).

To determine the occurrence and severity of cognitive changes during and following the ECT course, orientation and memory functions should be assessed before ECT is initiated and throughout the course of treatment (see Chapter 12 for details).

5.8.2. Subjective Effects

Shortly after ECT, most patients report that their cognitive function is improved relative to their pre-ECT baseline (Calev et al. 1991a; Cole-

man et al. 1996; Cronholm and Ottosson 1963a; Frith et al. 1983; Mattes et al. 1990; Pettinati and Rosenberg 1984; Sackeim et al. 1993, 2000; Shellenberger et al. 1982; Weiner et al. 1986b). Indeed, recent research has shown that 2 months after ECT the memory self-ratings of former patients are markedly improved relative to their pre-ECT baseline and are indistinguishable from those of healthy control patients (Coleman et al. 1996). In patients who have received ECT, memory self-ratings show little association with the results of objective neuropsychologic testing (Calev et al. 1991a; Coleman et al. 1996; Cronholm and Ottosson 1963a; Frith et al. 1983; Squire and Slater 1983; Squire and Zoukounis 1988; Weiner et al. 1986b). Outside the context of ECT, in both healthy individuals and neurologically impaired samples, subjective memory assessments generally have shown weak or no association with objective neuropsychologic measures (Bennett-Levy and Powell 1980; Broadbent et al. 1982; Larrabee and Levin 1986; Rabbitt 1982; Sackeim and Stern 1997). In contrast, strong associations are observed between mood state and memory self-ratings among patients who have received ECT as well as in other populations (Coleman et al. 1996; Frith et al. 1983; Mattes et al. 1990; Pettinati and Rosenberg 1984; Stieper et al. 1951; Weiner et al. 1986b). In essence, patients with the greatest symptomatic benefit from ECT typically report the greatest improvement in subjective evaluations of memory. Thus, when patients report subjective memory impairment after ECT, their mood as well as their cognition should be assessed.

A small minority of patients treated with ECT later report devastating cognitive consequences (Donahue 2000; Freeman and Kendell 1980, 1986). Patients may indicate that they have dense amnesia extending far back into the past for events of personal significance or that broad aspects of cognitive function are so impaired that the patients are no longer able to engage in former occupations. Because these subjective reports of profound cognitive deficits are rare, determination of their absolute base rates is difficult. Multiple factors likely contribute to these perceptions by former patients.

First, in some patients self-reports of profound ECT-induced deficits may reflect objective loss of function. As noted, as with the adverse effects of any medical intervention, individual differences occur in the magnitude and persistence of ECT's cognitive effects. In rare cases, ECT may result in a dense and persistent retrograde amnesia extending to years before the treatment (Sackeim 2000).