

DISCUSSION

Unmodified ECT: ethical issues

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Electroconvulsive therapy (ECT) is an important treatment in psychiatry; despite the myth that it is a barbaric and outdated practice (1), it is as relevant today as it was over six decades ago, when it was first introduced. This is because ECT can be life-saving in catatonic, suicidal, or otherwise highly disturbed patients (2); because it is of exceptional benefit in patients with psychotic depression (3); and, because it can be both therapeutic and prophylactic in patients who do not respond to antidepressant or antipsychotic drugs (2,4).

During ECT, a small electrical current (0.5-0.8 A) is passed through the brain via electrodes applied to the scalp. The current stimulates the brain and elicits a generalised seizure. This has two elements: the central seizure, manifested as characteristic EEG activity, and the peripheral seizure, or convulsion (2).

The exact mechanism of action of ECT is not known for certain; however, it is definitely known that, in the absence of the central seizure, electrical currents applied to the brain are therapeutically ineffective (5). It has further been established that, as long as the electrical activity in the brain which corresponds to the seizure is allowed to develop, the peripheral seizure is unnecessary (2,5).

Why would psychiatrists want to abolish the peripheral seizure? For one, the convulsion looks frightening to the viewer; this perpetrates the myth that ECT is a barbaric treatment (1). More importantly, research conducted during the early decades of ECT suggested that the convulsion is associated with a 20-40% risk of subclinical compression fractures of middle thoracic vertebrae. The risk was observed to be greater in males, in older subjects, and in those with osteoporosis (6-8). Although such fractures did not appear to be clinically significant (6,9), it was nonetheless considered that morbidity avoided is safety promoted.

While muscle relaxation during ECT had been attempted as early as in 1940, it was not until 1953 that succinylcholine was established as a suitable agent for peripheral muscle relaxation during ECT (2). With the use of succinylcholine, the peripheral seizure is abolished, and the musculoskeletal complications of ECT are minimised. Such administration of a muscle relaxant is known as modification of the ECT procedure.

At this stage, it is worth noting that unmodified ECT is, rarely, associated with other risks, such as dislocation of various joints, minor muscle or ligament tears, cardiac arrhythmias, aspiration of secretions into the respiratory tract, haemorrhage at various sites, and anxiety (10). The prevalence of such complications with unmodified ECT is

very low, and precise prevalences are unknown.

The administration of succinylcholine to a conscious patient, immediately before ECT, is frightening because succinylcholine paralyses all voluntary muscles, including those of respiration. It is therefore necessary to administer anaesthesia before ECT; however, the administration of anaesthesia is associated with its own risk, making the presence of an anaesthesiologist necessary.

This is where practitioners of ECT in India find themselves in a bind: on the one hand, their experience is that unmodified ECT is associated with virtually no risks to the patient; on the other hand, they find that anaesthesia cannot be administered safely to many categories of patients, and the presence of an anaesthesiologist cannot always be assured.

It is difficult to recruit anaesthesiologists in many parts of the country because these specialists are few and are monopolised by surgeons. Furthermore, involving anaesthesiologists raises the expenses of ECT from a negligible sum to a high, and (to many) hard-to-afford sum. Some, but not all Indian practitioners therefore continued to administer unmodified ECT. A survey of the medical membership of the Indian psychiatry found that, in 1991, only 44.2% of practitioners who administered ECT always administered modified treatments; however, only 24.2% invariably administered unmodified ECT (11). More recent data are unavailable.

Whether unmodified ECT is ethical or not depends upon a risk-benefit analysis. On the one hand, modified ECT reduces musculoskeletal risks, haemorrhage at various sites, pre-ECT anxiety, and the other but rare adverse effects of unmodified ECT that were listed earlier. On the other hand, modified ECT could be beyond the means (or the reach) of a large segment of Indian society, and introduces the risks associated with anaesthesia.

There is now further evidence upon which decision-making can be based. Tharyan et al (12) observed from a chart review that only 12 patients experienced fractures with unmodified ECT in a series of 1,835 patients who received a total of 13,597 ECT treatments across a span of 11 years. And, we found that only 1 of 50 patients experienced an adverse musculoskeletal event with unmodified ECT in a systematic, radiological investigation of the adverse effects of the procedure (13). It therefore appears prudent to conclude that while modified ECT may be the ideal, there can be situations in which unmodified ECT may be preferable to no ECT. Examples of such situations are those in which ECT is strongly indicated but anaesthesiological facilities are

unavailable or unaffordable; in such situations, the expected gains with ECT are likely to far exceed the risks with unmodified treatments.

The stage is now set for a systematic audit of modified as well as unmodified ECT so that better data may be made available upon which more valid decision-making can be based.

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One year after Erawadi

A year after they escaped the fire that devastated one of the 17 privately run asylums at Yerwadi, the fate of the 147 persons 'reunited' with their families by the Institute of Mental Health, Kilpauk, remains a mystery.

In August 2001, the state government took 164 mentally-ill persons into custodial care and transported them to the Institute of Mental Health, Kilpauk, for 'scientific treatment and rehabilitation'. Officials boast that 147 have been 'reunited' with their families. But doctors don't know if

this is good news. "Since January patients have been leaving to say with their relatives. But to date not one has revisited for a check-up; nor has there been any follow-up on our side. Where is the guarantee that relatives who had once dumped these patients would continue to care for them now? If the illness recurs there are all chances of these people being sent back to the streets," says a senior psychiatrist.

"It is for the relatives to take care of the patients – their number is too large for us to keep track," says senior medical officer Dr Murugappan.

Worse, doctors say none were offered rehabilitation of any kind. "...We kept them on chemical chains, drugs 24 hours a day, or on ECT. Though we promised to give them scientific treatment they were discharged before any rehabilitation programme. All because we are understaffed and lack facilities," says a senior psychiatrist.

Pushpa Narayan. Mental patients discharged without rehabilitation?
Indian Express (Trivandrum),
August 6, 2002.

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