

Junior doctors' training in the theory and the practice of electroconvulsive therapy

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Recent advances in knowledge about effective administration of electroconvulsive therapy (ECT) has placed great emphasis on the importance of good training and supervision of those administering it. The American Psychiatric Association requires that doctors be specifically accredited before they are allowed to give ECT. In England and Wales training is much more informal and ECT is often given by junior doctors. Doctors rostered to administer ECT in Wales and in two areas of England were surveyed as part of the College's third audit of ECT. About two-thirds of respondents were at senior house officer level. The training in ECT appeared of variable quality and one-half had not been supervised by an experienced psychiatrist on the first occasion they administered ECT. Responses to exam-type questions revealed that 45% lacked knowledge about one or more basic issues related to effective administration of ECT.

Recent research has shown that the passage of an electric current just sufficient to induce a seizure during electroconvulsive therapy (ECT) may be inadequate for maximally effective therapy: the current should be 50% or more above the seizure threshold (the minimum current required to induce a seizure) for bilateral ECT and 200% above in unilateral ECT. Furthermore the seizure threshold, and therefore the optimal current, varies according to patients' age, gender, medication, previous ECT treatments and other individual factors (Sackeim, 1991). For maximal efficacy and minimal side-effects those administering ECT should fully understand these findings and have access to, and training in the use of, appropriate equipment. This new knowledge about ECT has led to a revision of guidelines on its administration, both in the UK (Royal College of Psychiatrists, 1995) and in the US (American Psychiatric Association, 1990).

To ensure quality of practice, the American Psychiatric Association (APA) requires that a psychiatrist receive special training and is accredited prior to delivering ECT unsupervised (APA, 1990). In England and Wales, training and supervision in ECT are less formal and ECT is

usually administered by junior psychiatrists working to a roster. *The ECT Handbook* (Royal College of Psychiatrists, 1995) states that junior doctors should observe ECT prior to giving it themselves, and that they should be supervised by an experienced psychiatrist on the first few occasions that they administer it.

Over the past 20 years, the Royal College of Psychiatrists has conducted three large-scale audits of ECT. As part of the third audit, conducted by the College Research Unit, 33 ECT clinics in the old North-East Thames and East Anglian Regions, previously audited in 1991 (Pippard, 1992), were revisited as well as 17 clinics in Wales. The knowledge, training and supervision of junior doctors administering ECT were systematically evaluated to gauge the extent to which they were equipped to deliver ECT effectively.

The study

A three-part questionnaire was drafted and then piloted by administering it to a small sample of senior house officers (SHOs) and registrars. Part 1 of the questionnaire requests factual information about respondents' training and supervision in ECT; Part 2 consists of 19 items, each demanding a true/false response, to assess knowledge about the general management of patients receiving ECT and its effective delivery; Part 3 allows trainees to comment on the training they have received in ECT administration. Doctors who were rostered to give ECT in psychiatric services in Wales and the two English regions were identified and a total of 235 questionnaires despatched.

Returns were analysed with measures derived from the main audit which entailed a visit by R.D. These additional variables were the overall rating of the quality of the ECT clinics (good – standards met to a generally acceptable level; average – standards deficient in several areas; poor – some serious deficits) and the extent to which the consultant psychiatrist is involved in

ECT administration (as measured by the regularity of attendance at ECT sessions). Analysis was performed using the Statistical Package for the Social Sciences for Windows using chi-square or *t*-tests as appropriate.

Findings

Responses were received from 160 junior doctors (68% of the total); 58 from Wales (60% of the Welsh sample) and 96 from England (69% of the English sample), 6 (4% of the total) withheld their location. Of those who replied, 80 (50%) were SHOs in psychiatry and 23 (14%) were general practice vocational trainees (GPVTs) (these two groups often have less than one year's experience of working in psychiatry), 44 (28%) were registrars in psychiatry (who have more than one year's specialist training and have passed the first part of the College Membership examination); 9 (6%) were non-training grades and 3 (2%) were senior registrars (the latter have passed the full Membership examination).

Training and supervision

Eighty-five per cent ($n=136$) of respondents reported that they had read at least one journal paper on ECT, 63% ($n=100$) that they had seen the College video on ECT and 79% ($n=126$) that they had received some training on ECT in their present post. However, only 53% ($n=83$) reported that they had been supervised by a psychiatrist who was a Member of the College for the first treatment they had administered.

Knowledge of ECT

Despite piloting, two questions in Part 2 of the questionnaire proved open to misinterpretation and were excluded from subsequent analysis. Table 1 is a summary of the remaining 17 questions and the replies. The mean score of respondents was 60% (s.d.=22) when the questionnaire was analysed using the College Membership examination method of awarding a mark for a correct answer and deducting one for an incorrect answer. There were no significant differences between mean scores of respondents from the three areas. The more experienced doctors (staff grade, registrars and senior registrars) scored higher than less experienced doctors (SHOs and GPVTs) (69% *v.* 56%, *t*-test $P<0.001$). This difference was accounted for by a greater knowledge of issues relating to the general management of patients receiving ECT (first seven questions of Table 1, 78% *v.* 53%, *t*-test $P<0.02$); there was no significant difference between grades on knowledge of issues specific to the actual delivery of ECT (last 10 questions of Table 1, 63% *v.* 57%, *t*-test NS).

There was no association between the ratings of the overall quality of clinics and the scores of the doctors working here. Although junior doctors' knowledge was not closely associated with the regularity with which a consultant attended clinics for the whole cohort, it is notable that the seven junior doctors working in the only two clinics where a consultant attended almost every session scored significantly higher (78% *v.* 56%, *t*-test $P<0.02$) than the rest.

Forty-eight doctors (30%) commented on their training. Of these, 15 (from 12 clinics) praised the recent training they had received and commented favourably on the level of consultant supervision; 23 (from 16 clinics) were wholly critical and 10 (from 6 clinics) had mixed views. The most common complaints were of poor consultant supervision and a failure to teach both theoretical and practical aspects of ECT.

Comments

The previous audits of ECT practice by Pippard (1981 & 1992), also noted that the training of doctors administering ECT was poor and it therefore seems unlikely that practice will greatly improve simply in response to the latest handbook. This audit demonstrates that, despite the College's recent initiatives to improve practice and 17 years of audit, ECT is still often being delivered by inadequately trained personnel. This is perhaps not surprising given that two-thirds of doctors on ECT rosters were SHOs or GPVTs (most of whom would have been in their first year of specialist psychiatry training). Of particular concern are the 45% of doctors who answered incorrectly one or more of the first three questions pertaining to the delivery of ECT which are considered by the authors to be essential knowledge for anyone administering ECT.

Although numbers were small, it is striking that the junior doctors in the only two clinics which were genuinely consultant-led had significantly greater knowledge (these clinics were also the only two judged exemplary on the overall rating). Unfortunately, these clinics were the exception. Most of the rest followed the traditional British system of delegating responsibility for ECT administration to junior doctors on rotation. This means that as many as 10 different doctors may be on the ECT roster at any one time, that there will be a high turnover of doctors as they move on rotation to other hospitals and that a high proportion of administering doctors will be in their first or second job. Unless this system is changed it will remain difficult to assure the quality of training and supervision in ECT or to introduce a comprehensive national accreditation scheme, similar to that of the APA.

Table 1. Answers to multiple choice questions (%); correct answers in bold

	True	False	Don't know
Questions related to the management of patients receiving ECT			
Recovery after two to three ECT treatments is likely to be a placebo response	12	87	1
ECT is useful for the negative symptoms of schizophrenia but not positive symptoms	30	63	7
ECT is the treatment of choice in those under 18 years old with schizophrenia	4	91	5
Cognitive deficits can last for more than 48 hours post-ECT	92	7	1
Maintenance antidepressants should be used after a course of ECT even if the patient had previously failed to respond	96	3	1
ECT is contraindicated in patients taking anticonvulsant drugs or suffering with epilepsy	15	81	4
Patients on a Section 2 are not able to consent to ECT	38	58	4
Questions related to the delivery of ECT			
The seizure threshold increases during a course of treatment	88	11	1
Seizure threshold is usually higher in old men than young women	60	36	4
For ECT a convulsion and not just an electric current is required	93	6	1
A fit of about 5 minutes duration is desirable	2	98	0
Pre-oxygenation shortens convulsions	10	87	3
The motor fit does not exactly correlate with the EEG	88	9	3
Benzodiazepines can be helpful in delirious patients post-ictally	42	46	12
Right unilateral treatment is preferred for most right handed patients (if unilateral treatment is given)	82	13	5
A fit should be timed from when a bilateral convulsion is first observed	45	53	2
Neuroleptics raise the seizure threshold	23	74	3

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