

Practical training in the administration of ECT

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Aims and method Electroconvulsive therapy (ECT) is widely used in Britain and in most cases is administered by junior doctors. Many are inexperienced in its administration and the variety of machines available makes acquiring experience difficult. This report discusses a unique training programme involving a specially constructed 'dummy patient'.

Results This allows trainees to experience the practical administration of ECT and also learn in detail about the working of the ECT machine and the interpretation of electroencephalograms prior to giving treatment to patients.

Clinical implications We believe this training device will have a significant positive effect on the way junior doctors are trained in ECT.

Declaration of interest A patent application has been filed. We are currently in negotiation with manufacturers and acknowledge a conflict of interests.

Electroconvulsive therapy (ECT) is used throughout the country and the majority of psychiatric units have access to an ECT suite. The bulk of ECT treatments are performed by junior medical staff and concerns have been raised about the standards of training (Henderson *et al.*, 1993; Robertson *et al.*, 1997). Even in those units where good training is provided in the theory of ECT, the practical administration training is learnt on patients. Ideally this is supervised by an experienced consultant (Scott, 1995).

Modern training in the techniques of cardiopulmonary resuscitation uses specially constructed models allowing trainees to practice without the involvement of actual patients. We report on an analogous training programme in ECT now being used at Ormskirk and District General Hospital. Feedback from trainees having experienced the course is also included.

ECT equipment

ECT at our unit is given using the Thymatron DGx machine manufactured by Somatics Incorporated. This machine has a wide dose range and the facility for hands-free stimulus administration. It also permits monitoring of electroencephalogram (EEG), electrocardiogram (ECG) and electromyogram (EMG) activity.

The 'Training Head' was manufactured as a one-off commission by Dantec Electronics Ltd, who are the UK distributors for the Thymatron machine. It is a life-size model head which has electrode placements allowing the administration of bilateral and right unilateral ECT (see Fig. 1). There are also electrode connections for EEG, EMG and ECG leads. A separate remote control unit generates a signal which can simulate EEG or EMG activity under the control of the Psychiatrist conducting the training.

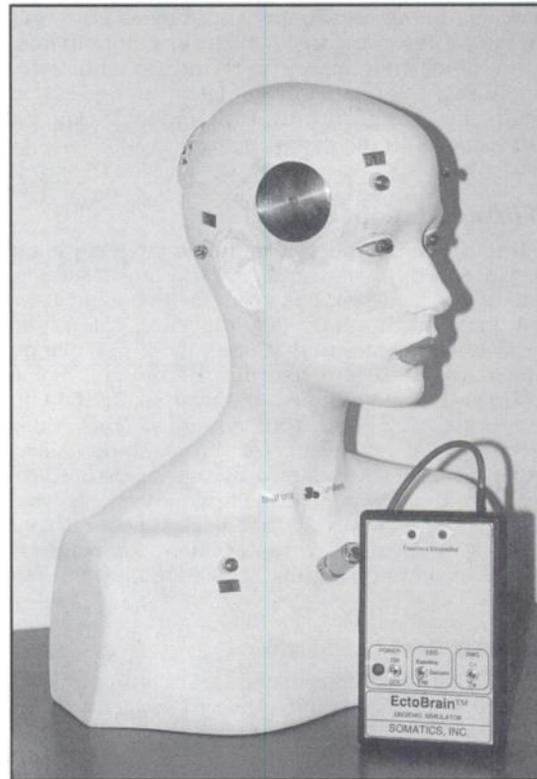


Fig. 1. ECT training head.

Training course

The new ECT course is a part of the Induction Course for new trainees at the Hospital. It takes place prior to the first ECT session. Attendance is compulsory. The trainees are initially orientated to the ECT suite and then given an introduction to the theory of ECT practice, including the Royal College of Psychiatrists' video on ECT. Stimulus dosing is also discussed. They are provided with a personal copy of the ECT protocol, stimulus dosing protocol and flow diagrams, and a copy of the patient monitoring booklet. Each trainee then has the opportunity to practise administering ECT to the training head.

The head has been constructed to allow a charge to be passed either bilaterally or unilaterally from the ECT machine in exactly the way it would be administered to a patient. Trainees, therefore, have the opportunity to practise with the machine as many times as they wish until they feel comfortable.

By use of the remote control unit, the psychiatrist in charge of the session can simulate a variety of EEG and EMG read-outs. These are then discussed to ensure that the trainees are able to put into practice the policies regarding stimulus dosing and re-stimulation. By the end of the training session, the trainees have, therefore, had abundant opportunity to use the ECT machine in a simulated clinical situation. In fact, the trainees now have the chance to administer more ECT treatments in a single training session than they would during their entire six-month attachment to the department.

Trainee feedback

Although the number of trainees who have so far experienced the new practical training session is small, the feedback has been positive. They have emphasised that it avoids subjecting patients to untrained doctors and allows lots of practice on the machine before treating the patient. Some trainees have mentioned that training in ECT can be quite 'dry' and that practical 'real time' scenarios make the use of the machine easier. All of them felt reassured by the opportunity to ensure that 'practice makes perfect'. It was emphasised, however, that it is important that this is not seen as a replacement for personal supervision and training.

Discussion

If ECT is to remain a useful treatment option for severe depression and other psychiatric disor-

ders, trainees must be able to administer it correctly. In order to manage this, trainees need to be fully confident with the equipment they have to use; a confidence which only comes with practice.

Surveys of training in ECT have revealed variation in practice. Robertson *et al* (1997) found that while 90% of clinics in Scotland had an ECT Lecture Induction Course, only 74% of clinics provided supervision for trainees giving their first treatment. Henderson *et al* (1993) have reported similar figures. Concerns about the adequacy of training have been present for many years (Pippard & Ellam, 1981) and still remain (Quinn, 1994). We believe that trainees cannot be fully comfortable with the administration of ECT unless they have practical experience in it, and know in detail how the equipment they are being asked to use works.

The training scheme provided at Ormskirk is, to our knowledge, unique. We believe this to be of great value to trainees and also to patients who can be fully assured that their treatment is being administered by a competent physician.

We would be very interested to hear from other units offering a similar training experience or from units who would like more information.

Acknowledgement

We would like to thank Dantec Electronics, particularly Alex Jones, for the tremendous effort put into manufacturing the Training Head, and coping with the various changes in design along the way.

References

- HENDERSON, T., ANDERSON, M. J. & STARKE, C. R. (1993) Administration of electroconvulsive therapy: training, practice and attitude. *Psychiatric Bulletin*, **17**, 154-155.
- PIPPARD, J. & ELLAM, L. (1981) Electroconvulsive therapy in Great Britain 1980. London: Gaskell.
- QUINN, E. (1994) Training in administration of ECT. *Psychiatric Bulletin*, **18**, 181.
- ROBERTSON, C., FREEMAN, C. P. L. & FERGUSSON, G. (1997) ECT in Scotland. *Psychiatric Bulletin*, **21**, 699-702.
- SCOTT, A. (1995) Training and supervision. In *The ECT Handbook* (ed. C. A. Freeman), p.94. London: Royal College of Psychiatrists.

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