

ECT practice

DEAR SIRS

Drs Pippard and West (*Bulletin*, March 1987, 11, 101) are right to remind us that standard of ECT practice will soon fall again unless close consultant supervision of facilities, procedure and training is maintained.

We note that they refer to 'recording schedules include doses of atropine etc' and wonder how many ECT units still routinely use atropine premedications. In our own Unit an injection of atropine was routinely given by the ward nursing staff about 30 minutes before the patient arrived for the treatment. Then the College Report on ECT practice made us take a closer look at our whole procedure and one result was that this practice was abandoned. We were subsequently informed by patients, who had previously been given atropine, that the most unpleasant part of the treatment was this preliminary injection and the progressive decrease of salivary flow during the period of waiting for the treatment.

Deaths following ECT may have been related to hypoxia, rather than vagally mediated, and the routine use of atropine is of questionable value. The use of intravenous atropine prior to induction of anaesthesia does not contribute to cardiac stability or produce consistent drying of secretions.¹ If an anticholinergic drug is deemed necessary by the anaesthetist, then glycopyrrolate produces comparable antisialogogue activity to atropine, with a smaller effect on heart rate.²

The next point from the letter on which we would comment is the matter of pulse frequency (ECT1 or 2) and duration with the new Constant Current apparatus. When we acquired this instrument some years ago there were no guidelines issued by the manufacturer and we had to establish our procedure by trial and error. Using bitemporal electrode placement, (which is our routine practice as we reserve unilateral—mastoid/parieto-frontal placement for special cases) we found the incidence of failed seizure was around 20% with the lower pulse frequency (ECT 1) at 4 seconds. We now routinely use the ECT 2 position at 3 seconds and our failed seizure rate is around 5%. In the case of a failed seizure we re-oxygenate, take even greater care to clean the skin under the placement position, and reapply at 4 seconds. Even then we occasionally have a further failed seizure and if this happens we do not re-apply the current at that session but make careful notes. Sometimes reduction of sedation may lead to a successful treatment on the next occasion but more often we set the timing for the (maximal) 6 seconds at ECT 2. At first we had expected to induce a degree of post-treatment confusion with this maximal application but this was not the case, and patients recover full orientation just as rapidly as do those patients who receive the lower timing. Incidentally we wish to set on record our impression that ECT-induced confusional states have been considerably reduced since adoption of the pulse wave delivery form. We would also draw to attention the observation of our medical physicist, Mr Philip Gaffney, who made careful recordings during treatment sessions

shortly after the introduction of the new apparatus to our Unit; this was that failed seizure was frequently due to insufficiently firm pressure during application and all junior psychiatrists administering ECT are now instructed to apply the electrodes with very firm pressure.

One final point about ECT practice, which we wish to question is the procedure of routine chest X-ray and ECG prior to treatment. This does seem to be the practice in some centres but we regard it as a waste of resources and reserve requests for these investigations for those cases where they are indicated on clinical grounds.

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REFERENCES

- ¹WYANT, G. M. & MACDONALD, W. B. (1980) The use of atropine in electroconvulsive therapy. *Anaesthesia and Intensive Care*, 8, 445-451.
- ²GREENAN, J., DEWAR, M. & JONES, C. J. (1983) Intravenous glycopyrrolate and atropine at induction of anaesthesia. *Journal of the Royal Society of Medicine* 76, 369-371.

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Drs Pippard and West have pinpointed grave problems in the management of ECT. All too often patients are referred for a course of three or four treatments which are then carried out by untrained timid juniors, who have little or no interest in other doctors' patients. The ECT session then becomes a meaningless chore and frequently a mere anaesthetic session with little benefit to the psychiatric condition.

No one can estimate the number of treatments a patient will require and good results can only be achieved by the patient's own doctor assessing the progress after each treatment.

It can be very difficult for inexperienced operators to tell if they have administered ECT efficiently to produce an effective treatment. New instruments are now available with which the chosen stimulus dosage in millicoulombs can be preset and the result displayed by a digital readout. This immediately tells if the ECT has been properly administered without losses and enables a meaningful record of treatments to be kept.

It is almost certain that a greater stimulus is required to produce a good clinical effect than that needed to produce a convulsion. Much further research is needed to determine the optimum stimulus and other factors in ECT so that this most valuable therapy shall not fall into disrepute.

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