

- 3 Which of the following statements accurately describe retrograde amnesia?
- a studies have proven that it reverses itself within 6 months
 - b it may be severe, erasing 10 years or more of the patient's life
 - c it erases only bad memories
 - d it is limited to dates and details that can be easily relearned
 - e most patients consider it a small price to pay for ECT's benefits.
- 4 Difficulty or disability with memory function on an ongoing basis is best described as:
- a retrograde amnesia
 - b anterograde amnesia
 - c depression
 - d memory disability
 - e memory loss

- 5 Tests that may be useful in assessing non-memory cognition include:
- a Wisconsin Card Sort Test
 - b paired associates
 - c the MMSE
 - d the Benton Visual Retention Test
 - e the Speaking Span Test.

MCQ answers				
1	2	3	4	5
a F	a F	a F	a F	a T
b F	b F	b T	b T	b F
c F	c F	c F	c F	c F
d T	d F	d F	d T	d T
e F	e T	e F	e F	e T

What I would say to a patient who asked me about this article

INVITED COMMENTARY ON: MEMORY AND COGNITIVE EFFECTS OF ECT

Allan Scott

Abstract Electroconvulsive therapy (ECT) remains an important treatment option for severe depressive illness, but it can have side-effects, including permanent gaps in memory. Where minimising the intellectual side-effects of treatment has priority, then treatment to only one side of the head (unilateral ECT) is preferable; where the speed of clinical improvement is paramount, then bilateral ECT may be preferred. The choice of how ECT is administered should, where possible, be part of the process of informed consent.

There are strong, and sometimes conflicting, views about electroconvulsive treatment (ECT). It was for this very reason that the Department of Health commissioned reviews to summarise what is known about the benefits and side-effects of the procedure. The review of patients' experiences after ECT (Rose *et al*, 2003) confirmed that permanent gaps in memory, what Robertson & Pryor (2006, this issue) refer to as permanent amnesia, is a recognised and common

side-effect after treatment. The review of clinical trials (UK ECT Review Group, 2003) found that the intellectual side-effects of ECT reflected mostly problems with memory, in particular amnesia. The gaps in memory were not restricted to personal autobiographical events. Few trials investigated the possibility of longer-term intellectual impairments, but those that did suggested that this was not a substantial problem (Carney & Geddes, 2003).

Does ECT have permanent non-memory effects?

Robertson & Pryor state that it is clear that ECT also has a serious permanent effect on intellectual functions apart from memory. This is not at all clear to me, and I will quote one of the cited studies to explain my puzzlement. Calev and colleagues reviewed the evidence about the non-memory side-effects of ECT: among the abilities tested were general IQ, language, perception, manual dexterity and attention. They concluded that such side-effects

‘usually do not exceed the effects of depression, when modern methods of ECT administration . . . are used. Following ECT, these functions progressively improve. At one week to seven months after ECT, performance is better than before ECT, probably because of the alleviation of both the effects of depression and of ECT’ (Calev *et al*, 1995).

ECT is not a single entity

I would stress what is missing from Robertson & Pryor’s article. One of the cited studies suggested more than 20 years ago that it would be useful to tell patients that how ECT is administered has an important effect on its memory side-effects (Squire & Slater, 1983). The electrical stimulation in ECT can be given over both temples – bilateral ECT – or only one side of the head – unilateral ECT. The side of administration in unilateral ECT is opposite to the side of the brain more involved in language function. It was clear to Squire & Slater that unilateral ECT was associated with markedly less memory impairment and that memory side-effects were also of less concern to individuals so treated. The UK ECT Review Group’s more recent review of clinical trials confirmed that people treated with unilateral ECT regain normal alertness and orientation more quickly after individual treatments and are less likely to experience amnesia.

We should stop talking about ECT as a single entity, but refer instead to either bilateral or unilateral ECT; they are quite different in their side-effects. Robertson & Pryor’s article refers to the Royal College of Psychiatrists’ revised guidelines for ECT practitioners: these recommended that the choice of administration should, where possible, be part of the process of informed consent for ECT. Where

minimising the intellectual side-effects of treatment has priority, then unilateral ECT is preferable. Where the speed of clinical improvement is paramount, as in life-threatening depressive illness, then bilateral ECT may be preferred.

Do we still need ECT?

You might wonder whether it would just be easier to stop using ECT. The review of clinical trials concluded that ECT remains an important treatment option for the management of severe depressive illness (UK ECT Review Group, 2003).

Better evidence

We do need high-quality collaborative studies. What we don’t need is more research done by patients for patients and by ECT practitioners for ECT practitioners (Carney & Geddes, 2003).

Declaration of interest

A.S. is Editor of the Royal College of Psychiatrists’ (2005) revised guidelines for ECT practitioners.

References

- Calev, A., Gaudino, E. A., Squires, N. K., *et al* (1995) ECT and non-memory cognition: a review. *British Journal of Clinical Psychology*, **34**, 505–515.
- Carney, S. & Geddes, J. (2003) Electroconvulsive therapy. *BMJ*, **326**, 1343–1344.
- Robertson, H. & Pryor, R. (2006) Memory and cognitive effects of ECT: informing and assessing patients. *Advances in Psychiatric Treatment*, **12**, 228–237.
- Royal College of Psychiatrists (2005) *The ECT Handbook* (2nd edn) (Council Report CR128). London: Royal College of Psychiatrists.
- Rose, D., Fleischmann, P., Wykes, T., *et al* (2003) Patients’ perspectives on electroconvulsive therapy: systematic review. *BMJ*, **326**, 1363–1367.
- Squire, L. R. & Slater, P. C. (1983) Electroconvulsive therapy and complaints of memory dysfunction: a prospective three-year follow-up study. *British Journal of Psychiatry*, **142**, 1–8.
- UK ECT Review Group (2003) Efficacy and safety of electroconvulsive therapy in depressive disorders: a systematic review and meta-analysis. *Lancet*, **361**, 799–808.

Allan Scott is a consultant psychiatrist in general adult psychiatry and an honorary senior lecturer in the Andrew Duncan Clinic at the Royal Edinburgh Hospital (Morningside Terrace, Edinburgh EH10 5HF, UK. Email: Fiona.Morrison@pct.scot.nhs.uk). He was a member of the UK ECT Review Group, which undertook the systematic review of clinical trials in ECT.