

Comparison of electroconvulsive therapy and antidepressants



Brief 101151

1. INTRODUCTION

Depression is one of the more common forms of mental illness. It has been estimated that approximately 9.5% of the population will suffer with depression at any one time (Robins and Regier 1990) and that 17% of people will suffer with depression at some point in their life (Blazer et al 1994).

Defining depression is not a straight forward task. This is due to the fact that it can range from normal unhappiness through persistent and pervasive ways of feeling and thinking to psychosis (Hale 1997). Having said this, a number of different features which can be associated with depression have been identified by Hale (1997):

- Persistent low mood
- Loss of interest and enjoyment
- Reduced energy and diminished activity
- Poor concentration and attention
- Low self esteem and low confidence
- Ideas of guilt and unworthiness
- Bleak pessimistic views of the future
- Ideas or acts of self harm or suicide
- Disturbed sleep
- Diminished appetite

It is also possible to distinguish between three major types of depression.

The first form of depression is Dysthymia which involves long-term chronic depressive symptoms which do not necessarily disable the individual. The

second form is Bipolar Disorder which involves the patient experiencing periods of mania and depression through cycles of mood change. The third and final category concerns Major Depression. The symptoms involved with this mental illness combine to ensure that it is difficult for the patient to work, study or to enjoy activities as well as them having difficulties regarding eating and sleeping patterns. It is this third and most serious form of depression which will be the focus of the following discussion.

1. TREATMENT OF SEVERE DEPRESSION

A number of different approaches to the treatment of depression have been taken which are based on a range of theoretical perspectives. These include approaches such as Cognitive Behavioural Therapy, Psychoanalysis and those based on increasing exercise levels. However, perhaps the most common treatment for depression involves the use of antidepressant drugs (American Psychiatric Association 1993) These include medications such as Tricyclic (which is cheap and effective but does have side effects which limit compliance), Selective Serotonin Up-Take Inhibitors (which has fewer side effects but less effective for disturbed sleep) and Monoamine (which, in rare cases, can be fatal when mixed with certain foods) Although antidepressants can be effective, research has indicated that they may not be the optimal solution. For example, Thomas et al (1982) conducted a study involving 115 participants who were randomly allocated to receive either a combination of antidepressants or a placebo. The medication was found to have a significant effect but non-compliance was identified as a significant problem. It has been estimated that non-compliance regarding antidepressant drugs is between 20 and 59% (Johnson 1973 and Thomas et al 1982). Further

research has also reported that patients who are suffering with depression are still at a significant risk of relapse or recurring symptoms even when they have been adhering to their medication programme for a long period of time (Grunhaus et al 1990). It may also be the case that medication is not suitable for all forms of depression. For example, Hale (1997) suggested that antidepressants may not be effective for psychotic depression. Therefore, as a result of the potential drawbacks of non-compliance, relapse and not being effective for all forms of depression, efforts have been made to identify other approaches for the treatment of severe depression.

One of the most controversial treatment approaches is Electroconvulsive Therapy (ECT). It was first used in 1938 by Cerletti and Bini (Linnington and Harris 1988). It involves sending an electrical current through the patient's brain with the aim of stimulating the release of neurotransmitters which will ultimately improve the patient's mood. ECT has obtained a somewhat negative reputation due to stories of bitten tongues and fractured bones and it is often seen as a form of punishment rather than treatment. However, reviews of its application have demonstrated that ECT does have significant benefits compared to simulated ECT, when all procedures are followed without an electrical current actually being given (The UK ECT Review Group 2003). Whenever one is making decisions regarding the use of any given treatments, one must consider the body of scientific evidence which has assessed the treatment's efficacy and effectiveness. The following review will aim to consider the research which has assessed the efficacy and effectiveness of ECT as a treatment for severe depression in order to determine its effectiveness with reference to the use of antidepressants.

2. RESEARCH QUESTION

Thus, the following review will aim to answer the question ' Is ECT an effective treatment compared with antidepressants in cases of severe depression'. The methodology which was employed within this research will now be outlined.

2. LITERATURE SEARCH

A systematic review aims to integrate existing information from a comprehensive range of sources, utilising a scientific replicable approach, which gives a balanced view, hence minimising bias. It can also be stated that systematic reviews provide a means of integrating valid information from the research literature to provide a basis for rational decision making concerning the provision of healthcare.

2. 1 SOURCES OF DATA

The methodology employed within the research involved obtaining data from three key sources: Computerised searches, Manual searches, and the Internet. Each of these data sources will now be considered in more detail.

2. 11 COMPUTERISED SEARCHES

The methods used in this research will include a detailed computerised literature search. Multiple databases, both online and CD-Rom will be accessed to retrieve literature because they cite the majority of relevant texts. The computerised bibliographic databases are:-

- MEDLINE

- EMBASE
- CINAHL
- PSYCHINFO
- Biological Abstracts
- Cochrane
- SIGLE

However because articles may not be correctly indexed within the computerised databases, other strategies will be applied in order to achieve a comprehensive search.

2. 1. 2 MANUAL SEARCHES

A manual search will be performed to ensure that all relevant literature is accessed. The manual searches will include:-

- Books relevant to the topics from university libraries and web sites
- Inverse searching- by locating index terms of relevant journal articles and texts
- Systematically searching reference lists and bibliographies of relevant journal articles and texts

2. 1. 3 THE INTERNET

The internet will provide a global perspective of the research topic and a searchable database of Internet files collected by a computer.

Sites accessed will include:-

- Department of Health

- National Institute of Clinical Excellence
- English National Board of Nursing, Midwifery and Health Visiting
- Google
- British Medical Journal

2. 2 IDENTIFICATION OF KEY WORDS

A set of key words will be used within the literature search. Elements of the research question will be used to provide the search terms. Therefore, the words Electroconvulsive Therapy, Antidepressants, Depression, Effectiveness and Evaluation will all be used.

2. 3 INCLUSION AND EXCLUSION CRITERIA

To ensure that the more relevant research studies are identified, a set of inclusion and exclusion criteria will be utilised. In order to be included in this research the studies will need to relate to the evaluation of Electroconvulsive Therapy and relate to the treatment of depression. Furthermore, studies will be excluded if they are published before 1975 or if they are not available in English.

3. DISCUSSION

This review has identified literature which has focussed on assessing the effectiveness of ECT in comparison to antidepressants regarding the treatment of severe depression. In order to structure the discussion, the research will be analysed with reference to the benefits of ECT regarding relapse, patients who are drug-resistant and those with severe depression in

particular. The potential drawbacks of ECT will then be briefly considered before overall conclusions are drawn regarding the research question.

3. 1 RELAPSE

Studies were located which highlighted the benefits of ECT regarding the reduction of relapse. For instance, Petrides et al (1994) reviewed the case histories of 33 patients who had been diagnosed with long term depression. A set of 21 patients were included in the study as a one year follow up report was available for analysis. Each of the participating patients had been taking antidepressants for a significant length of time but were still experiencing relapses of depression. After the delivery of ECT it was reported that the number of patients with depression who suffered relapses fell from a normal rate of 50% to 33% at the one year follow up. For the patients with delusional depression in particular, the relapse figure fell from a normal rate of 95% to 42%. Based on this research it would appear that ECT can be more effective than antidepressants in terms of reducing relapse rates.

A more recent and relevant study was conducted by Gagne et al (2000) which also involved the retrospective reviewing of patients' notes. Two groups of 29 matched participants were identified. The first group had only been taking antidepressants as the second group had antidepressants along with ECT. At the two year follow up stage the relapse rates for those who had ECT was 52% compared to the 93% associated with those who only had medication. At the five year follow up stage, the relapse rate for the drug-only group had fallen slightly to 73% whereas the ECT group had fallen dramatically to just 18%. The average survival rate of the ECT group was 6. 9

years which was significantly longer than the 2.7 years for the drug-only group. Therefore the research considered in this section would lead one to conclude that ECT can be more effective than antidepressants alone in terms of reducing relapse rates. Having said this, it should be noted that these research projects involved combining ECT with antidepressants rather than replacing them entirely.

3.2 MEDICATION RESISTANT PATIENTS

Although antidepressants are effective for many patients with depression, there are some groups for whom it is less effective. Rabheru and Persad (1997) reviewed the literature which focused on assessing the effectiveness of ECT for patients who were found to be resistant to antidepressant medication. They found that the research evidence indicated that ECT could have significant benefits for medication resistant patients. These benefits were particularly relevant for elderly patients with depression. An important point to make here, however, was demonstrated by research conducted by Prudic et al (1996). They reported that the effectiveness of ECT may decline as the time for which the patient has suffered with severe depression increases. Therefore, the approach of using ECT when the patient has been found to be resistant to antidepressants may not be the optimal approach as the possible benefits of ECT may have been reduced. Therefore, this section has demonstrated that ECT could be beneficial for patients who have severe depression and have not been significantly helped by the use of antidepressants. However, it is important to note that the use of ECT may decline over time.

3. 3 PATIENTS WITH SEVERE DEPRESSION

Further research has indicated that ECT may well have particular benefits over antidepressants with regards to patients who have severe depression. Sobin et al (1996) conducted research to evaluate the effectiveness of ECT for patients with a range of levels of depression. They reported that 70% of the participants responded significantly as a result of the ECT and that significant improvements were made by those who had severe depression. Other research has also lent support for the assertion that ECT is particularly beneficial for patients with severe depressive symptoms, mood congruent delusions and those who are at prominent risk of committing suicide (Martin 1989, Schatzberg 1992, Persad 1990, Philibert et al 1995 and Fink et al 1996). It appears that the attributes of ECT are particularly suited to the treatment of people with severe depression. It may be that the more severe a person's depressive symptoms are, the more drastic and severe the treatment approaches need to be for them to be effective.

4. CONCLUSIONS

This review has considered research which has investigated whether ECT is effective in treating severe depression when compared to antidepressant drugs. Based on this research it can be concluded that ECT, when combined with antidepressants, does appear to significantly reduce patients' relapse rates. It can also be said that the evidence supports the view that ECT can be effective for patients who have been found to be resistant to antidepressants. The third and final conclusion is that ECT appears to be particularly suited to patients with the more severe forms of depression.

Having said this, some criticisms need to be acknowledged regarding this body of research. For instance, Rose et al (2003) highlighted three major drawbacks. Firstly 1 in 3 patients who are given ECT report persistent memory loss. Secondly, the research studies conducted by clinicians in this area report more positive results than those conducted by consumer agencies. This may be due to the selection of participants or the focus of the research questions. The third and final drawback outlined by Rose et al (2003) is that the studies which support ECT rarely assess the long term effects or cognitive functioning and the majority of them were conducted many years ago using small samples. The research is also limited because it mainly uses case studies (Thienhaus et al 1990), naturalistic studies (Aronson et al 1987) or retrospective reviews of patient notes (Stiebel 1995). Few randomly controlled trials were highlighted by this literature search. Such criticisms must be kept in mind when considering the effectiveness of ECT in comparison to antidepressants for treating severe depression.

5. 0 IMPLICATIONS FOR PRACTICE

Guidelines produced by the National Institute of Clinical Excellence, based on a review of Department of Health and Cochrane database research, recommends that ECT be used for rapid and short term improvements for patients with severe depression or who are at significant risk of suicide (Tharyan and Adams 2003). However, as highlighted by the Royal College of Psychiatrists (2003) in their response to these guidelines, the use of ECT may have a wider scope than this approach would suggest and the guidelines may ensure that patients who may benefit from ECT are not given the treatment. Further research in this area will provide a basis upon which to

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test the appropriateness of these guidelines and the current use of ECT. It would appear that ECT can have significant benefits for patients with severe depression but that more efforts need to be made to tackle the negative impressions which may be associated with this treatment such that it can become a more accepted approach. The main implication of this review for practice is that ECT appears to have a significant role to play in the treatment of severe depression but that it is likely to be alongside the use of antidepressants rather than instead of them. This strategy will enable the most comprehensive treatment programme to be delivered to the patients and ensure that their chances of a full recovery are maximised.

REFERENCES

American Psychiatric Association (1993). Practice guidelines for major depressive disorder in adults. *American Journal of Psychiatry* ; 150(suppl): 4.

Aronson TA, Shukla S, and Hoff A: (1987) Continuation therapy after ECT for delusional depression: a naturalistic study of prophylactic treatments and relapse. *Convulsive Therapy*; 3: 251-259 [Medline]

Blazer DG, Kessler RC, McGonagle KA, and (1994) Swartz MS. The prevalence and distribution of major depression in a national community sample: the national comorbidity survey. *American Journal of Psychiatry* ; 151: 979-6.

Gagne, G. G., Furman, M. J., Carpenter, L. L. and Price, L. H. (2000) Efficacy of continuation ECT and antidepressant drugs compared to antidepressants alone in depressed patients. *American Journal of Psychiatry* , 157, 1960-1963

Grunhaus L, Pande AC, and Haskett RF (1990) Full and abbreviated courses of maintenance electroconvulsive therapy. *Convulsive Therapy*; 6: 130-138

Johnson DAW. (1973) Treatment of depression in general practice. *British Medical Journal* ; ii: 18-20.

Linnington, A. and Harris, B. (1988) Fifty years of electro-convulsive therapy. *British Medical Journal* , 297, 1354-1355

Martin BA (1989) Electroconvulsive therapy for depression in general psychiatric practice. *Psychiatric Journal of the University of Ottawa*; 14: 413-417

National Institute for Clinical Excellence (2003). *Guidance on the use of electroconvulsive therapy* . London: NICE, 2003. www.nice.org.uk/pdf/59ectfullguidance.pdf(accessed 9 Jun 2003).

Persad E: (1990) Electroconvulsive therapy in depression. *Canadian Journal of Psychiatry*; 35: 175-182 [Medline]

Petrides G, Dhossche D, Fink M, and Francis A: (1994) Continuation ECT: relapse prevention in affective disorders. *Convulsive Therapy*; 10: 189-194

Philibert RA, Richards L, Lynch CF, and Winokur G: (1995) Effect of ECT on mortality and clinical outcome in geriatric unipolar depression. *Journal of Clinical Psychiatry*; 56: 390-394[Medline]

Prudic J, Haskett RF, Mulsant B, Malone KM, Pettinati HM, Stephens S, et al. (1996) Resistance to antidepressant medication and short-term clinical response to ECT. *American Journal of Psychiatry* ; 153: 985-92.

Rabheru K, and Persad E: (1997) A review of continuation and maintenance electroconvulsive therapy. *Canadian Journal of Psychiatry*; 42: 476-484

Robins LN, Regier DA (Eds) (1990). *Psychiatric Disorders in America, The Epidemiologic Catchment Area Study*,; New York: The Free Press.

Rose D, Wykes T, Leese M, Bindman J, and Fleischmann P. (2003) Patients' perspectives on electroconvulsive therapy: systematic review. *British Medical Journal* ; 326: 1363-5. [Abstract/Free FullText]

Sackeim HA (1994) Continuation therapy following ECT: directions for future research. *Psychopharmacology Bulletin*; 30: 501-521

Schatzberg AF: (1992) Recent developments in the acute somatic treatment of major depression. *Journal of Clinical Psychiatry*; 53(Mar suppl): 20-25

Sobin C, Prudic J, Devanand DP, Nobler MS, and Sackeim HA. (1996) Who responds to electroconvulsive therapy? *British Journal of Psychiatry* ; 169: 322-8.

Stiebel VG: (1995) Maintenance electroconvulsive therapy for chronically mentally ill patients: a case series. *Psychiatric Services*; 46: 265-268

Tharyan P, and Adams` `C`E (2003) Electroconvulsive therapy for schizophrenia. Cochrane Schizophrenia Group. *Cochrane Database Systematic Review* ;(1): CD000076

The UK ECT Review Group (2003) . Electroconvulsive therapy: systematic review and meta-analysis of efficacy and safety in depressive disorders. *Lancet* ; 361: 799-808

Thienhaus OJ, Margletta S, and Bennett JA: (1990) A study of the clinical efficacy of maintenance ECT. *Journal of Clinical Psychiatry*; 51: 141-144

Thompson J, Rankin H, Ashcroft GW, Yates CM, McQueen JK, and Cummings SW. (1982) The treatment of depression in general practice: a comparison of L-tryptophan, amitriptyline and a combination of L-tryptophan and amitriptyline with placebo. *Psychological Medicine* ; 12: 741-751[Medline].