ORIGINAL PROF-854

ELECTRO CONVULSIVE THERAPY;
GENERALLY IGNORED BUT STILL AN EFFECTIVE TREATMENT MODALITY

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ABSTRACT... khalidsudozai@yahoo.com **Objective:** To compare the efficacy of ECT with those of pharmacological treatment modalities, and to bring to light the continuing usefulness of ECT despite the availability of a number of newer and better medicines. **Design:** A prospective comparative study. **Setting:** Department of psychiatry, Combined Military Hospital Pano Aqil Cantt **Period** From Jan 2003 to March 2004. **Subjects and Methods:** Patients suffering from Major Depression, Mania, Puerperal Psychosis, and Schizophrenia, were included in the study. Two groups were made. I.e. patients treated with medicines only (group I), and patients treated with ECT alone as first line therapy(Group II). Each group comprised 50 patients. Patients belong to two groups were matched closely regarding their age, sex duration or illness, clinical picture and previous treatment etc. Response to treatment was judged with the help of HDRS in case of depressed patients and clinically only in rest of the patients. Results of the treatment were recorded and comparison made for two groups. SPSS was utilized to obtain statistical significance. **Results:** ECT proved to be a superior treatment in the achievement of quick remission, especially in those depressed patients with acute onset, psychomotor retardation, psychotic features, and severe disabling anxiety associated with primary illness. Very excited manic patients quickly responded to ECT and calmed down. Catatonic Schizophrenics showed dramatic response, and so did patients with puerperal Psychosis, in achieving early remission. **Conclusion:** In-spite of misinformation by media, and misconceptions in the minds of lay people, as well as, those related to medical profession, ECT remains a very effective and safe treatment even today. It should be used without hesitation wherever indicated. Limitations of present study need improvement in future studies, in order to achieve more scientifically oriented results.

Key words: Efficacy, ECT, pharmacological treatments.

INTRODUCTION

Electro convulsive therapy (ECT) has been used since its introduction by Cerletti and Bini in 1938, as a very effective treatment until about two decades ago. Initially it was without anaesthesia, either with I/V sedation with Diazepam etc or without any kind of sedation/relaxation at all. With this kind of ECT, despite usefulness, it had some drawbacks in the form of frightening condition of the patient during convulsions, risk of fractures, dislocations, CVA, acute MI, respiratory failure, muscle injuries, severe headache, transient memory loss, and post-ictal confusion[1].

Although the risk of above mentioned complications was

very less if the patients were properly selected for the procedure, yet the dangerousness of ECT was exploited by media and those who belonged to the school of thought opposing the use of ECT. Moreover, the concept of mere use of "electric shocks" could not be assimilated by our illiterate and ignorant population and horrifying concepts of ECT were presented to the patients and their relatives undergoing or likely to undergo ECT. Besides this, any illness/complication that took place during, immediately following ECT, or even years following ECT, was attributed to this treatment modality. All this resulted in growing consensus against ECT and people started hesitating in getting and giving ECT. In developed countries as well ECT is the most controversial treatment in psychiatry. The nature of treatment itself, its history of abuse, unfavorable media presentations, compelling testimony of former patients, special attention by the legal system, uneven distribution of ECT use among practitioners and facilities and uneven access by patients, all contribute to controversial context[2].

The trend changed to some extent in favour of ECT since the commencement of general anesthesia, which improved its safety to a very significant extent, however, the debate still continues and people are usually reluctant to use it as a first line treatment even now.

The biggest argument in favour of ECT is its existence as a modality of treatment all over the world, even now, in spite of all arguments against it and even the risk of suit in the court of law[3]. Present study, therefore, aims at comparison of effectiveness of ECT treatment with that of pharmacological treatments and hence, to rebuild confidence in a useful and safe treatment method.

MATERIAL AND METHODS

His study was carried out at the Department of Psychiatry Combined Military Hospital Pano Aqil from Jan 2003 to March 2004.

Major study sample was formed by patients suffering from Major Depression, Mania Puerperal psychosis, and Schizophrenia catatonic. Patients suffering from co-morbid physical pathology were excluded from the study. Two groups were made, i.e. group I comprised those patients who were treated with medicines only and group II comprised patients treated with ECT alone as first line treatment and later maintained on psycho tropic medicines. Both groups comprised 50 patients each (diagnosis wise breakdown of which is given in table I & II), matched in all possible respects including age, sex, onset of illness, duration of illness, type of illness and previous treatments. Diagnosis was made in accordance with ICD-10 criteriae. Cut off value for HRDS was taken as 17. Written consent was obtained from patients/relative for participation in the study.

Antidepressants included all available classes, i.e. TCAs, SSRIs and SNRIs etc. Antipsychotic medicines included Haloperidol, Trifluperazine, Flupenthixol, Resperidone and Olanzapine. Antimatic drugs included Lithium Carbonate, Sodium Valproate and Carbamazepine. Written consent was obtained for ECT under GA from patients themselves and from key relatives in case of patients who were unable to give informed consent. All patients undergoing ECT underwent pre-anaesthesia assessment. Bilateral ECT was given under GA thrice per week. Progress of the treatment was judged both clinically and with the help of HRDS in case of depression. 10 was taken as indication of remission. Progress regarding rest of the illnesses was judged clinically only. Response was defined as progressive reduction in the severity if illness following application of a treatment modality. Remission was defined as disappearance of signs and symptoms of illness in response to treatment, leaving the patient comfortable.

Response of the illness to treatment and achievement of remission were recorded. These parameters were compared between two groups and data obtained. SPSS was used to obtain statistical significance.

RESULTS

By and large, ECT proved to be a superior treatment over antidepressants in bringing out a quick response and hence achieving a quick and complete remission (Table-I).

Table-I. ECT vs Non-ECT Groups in achieving remission					
ECT Group			**Non-ECt Group**		
Males	48		Males	47	
Females	02		Females	03	
Average age	28 years		Average age	25 years	
Educational status	Illiterate to intermediate		Educational status	Illiterate to intermediate	
Time taken to achieve remission			**Time taken to achieve remission**		
Diagnosis	Time taken	No. of pts	Diagnosis	Time taken	No. of pts
Major depression	2 weeks	17	Major depression	2 weeks	0(P<0.05)
	3 weeks	9		3 weeks	5 (P<0.5)
	4 weeks	2		4 weeks	12
One patient did not achieve remission					
Mania	1 week	6	Mania	1 week	2(P<0.05)
	2 weeks	2		2 weeks	4
Four patients did not achieve remission					
Puerperal psychosis	2 weeks	3	Puerperal psychosis	2 weeks	1 (P<0.05)
	3 weeks	2		3 weeks	2
Schizophrenia catatonic	2 weeks	3	Schizophrenia catatonic	2 weeks	0 P<0.05
	3 weeks	2		3 weeks	1

Its efficacy was specially remarkable in patients with acute onset, severe illness, patients with suicidal ideation, patients with psychomotor retardation, patients with severe excitement, patients with psychotic features and patients with marked anxiety associated with the primary illness. As is evident from table I, significant no of patients in all categories of illnesses achieved remission much more quickly as compared to the group on medication alone. Main complaints by the patients were neckache, backache, headache and memory disturbances. In group I, onset of action of treatment and achievement of remission was considerably delayed. Till the onset of significant improvement, many patients remained uncomfortable and in agony. Effects of their illnesses were evident in their relatives too, in the form of worry and anxiety.

Table-II. Breakdown of the patients diagnosis wise	
Diseases	**No of patients**
Major depression	29
Mania	12
Puerperal psychosis	5
Schizophrenia Catatonic	4

Those with psychomotor retardation, suicidal ideation and concomitant anxiety had to be looked after specially from the point of view of feeding, self care, restlessness and the risk of suicide. Very excited and violent patients

had to be physically restrained in addition to parental sedation. With the achievement of full remission, patients became comfortable and had no side effects like those of treatment with ECT.

DISCUSSION

ECT-treatment of choice in a number of psychiatric illnesses in the past, has now gone into the background. Besides general disliking, there is a school of though which is specially against the use of ECT and they present it as a cruel way of treatment[3].

Present study suggests that ECT is still very effective in its specific indications, i.e. Major Depression, depression with suicidal features, depression with psychotic features, depression with psychomotor retardation, depression with marked anxiety, Puerperal psychosis Catatonic Schizophrenia and very excited manic. Main different of response to treatment during comparison of ECT and psycho tropic medicines emerged as the quickness of response. In case of ECT, patients started to feel better, in most of the cases following 1-3 applications, which made them/their attendants comfortable about the progress of treatment. Achievement of full remission took 6-8 applications, i.e. 2-4 weeks, thus reducing the hospital stay and expenses incurred on treatment. No doubt, medicines are effective in different illnesses, however there are two drawbacks which are significant in the treatment process, i.e. time lag and variation in response of different patients to different drugs. Psycho tropic drugs usually have a time lag of three weeks before their onset of action. In an acute illness, this is a very significant time period, during which patient is very disturbed.

There is risk of self-harm or suicide, risk of any type of damage/aggression by violent manic patients, fear of malnutrition and its complications for the retarded, severely depressed and with drawn patients. Many patients in such condition are not willing to take medicines; many of them actively resist medication. In case of variable response by different patients, usually one medicine is started and its response awaited. If following adequate time period, no adequate response is observed, medicine is changed. New medicine is likely to take its own time. All this is very stressful for the patients, their relatives and the people involved in patients' management. Quick remission by the ECT is the answer to all these problems. With the combination of GA and ECT, all the conventional side effects of ECT are gone. Now patients feel transient memory loss only. Post – ECT headache response very well to addition of Pentazocaine (Sosegon) or Pethidine to anesthetic agents. On weighing the advantages and disadvantages of ECT, one reaches the conclusion that ECT is very beneficial with practically no disadvantages, if given with G. A to properly selected patients.

A lot of work has been done on this subject in developed countries. In a study by Buchan Hetal, it was proved that ECT had a specific and rapid anti-suicide effect. Antidepressant medication in comparison, often had lag time of several weeks, before a similar clinical effect was observed. After one ECT, 34% patients were no more suicidal, after three ECTs 68% and after seven ECT's 90% patients were no more suicidal. Only 5% patients failed to reach a suicidal rating of 0[2].

ECT is effective in cardiac ischaemia. Glassman and his colleagues reached the conclusion that ECT is appropriate to consider for severely depressed, melancholic patients with cardiac ischaemia if there is a need for rapid and definite response. In non-psychotic patients, efficacy is at least equal to TCAs and cardiac safely favours ECT in comparison with TCAs.

Janakiramaiah et al concluded that with thrice application of ECT per week, 85% melancholic patients achieved remission at the end of four weeks[8].

According to Shalton RC, ECT is the most effective treatment for depression, with 80% to 90% patients responding, often rapidly and dramatically. Maintenance of continuation ECT may be the answer for cases with frequent relapses[9].

Wiferatne and his colleagues carried out a systematic review of treatment with ECT and suggested that ECT is

a painless procedure. It is still more effective and faster procedure, requires short hospital stay, has lower mortality over three year period for acute depression and fewer suicidal attempts at six month follow up period. As a second line treatment in Mania, it is almost equally effective as Lithium and also effective in therapy resistant manics[10].

Shapira Band Lever B carried out a review of 43 patients given maintenance (continuation) ECT over year 2000 at Mayo Clinic Minnesota. The authors concluded that continuation ECT was efficacious, well tolerated and had reduced the need for hospitalization in this chronically depressed, medication resistant population[11].

A study by Patrides and his colleagues of Unipolar Depression in 18- 85 years age group, defined remission as more than 60% reduction in HRSD scores with final scores of 10 or less sustained over one week; found that among patients who completed full course, i.e. 12 sessions of ECT, remission rates were 96% for psychotic depression with ETC. Scores of 0 were reported in 68% after one week of ECT, in 87% after two weeks and in 93% after three weeks[13].

Shamaila I H and Ijaz H compared the efficacy of combined Haloperidol with ECT in the treatment of Mania in selected cases who were resistant to medication alone and were severely ill. The results indicated that the group receiving combination of Haloperidol and ECT did significantly better than the group on medication only, in severely diskturbed cases[14].

UK ECT review Group reviewed published work for the efficacy and safety of ECT with simulated ECT, versus pharmacotherapy and versus different forms of ECT for patients with depressive illness. Interpretation was that ECT was an effective short term treatment for depression and was probably more effective than drug therapy. Bilateral ECT was moderately more effective than unilateral ECT, and higher dose ECT was more effective than low dose[3].

Abrams R A, conclude that ECT is demonstrably effective for a narrow range of severe psychiatric disorders in a limited number of diagnostic categories: delusional and severe endogenous depression and mania and certain schizophrenic syndromes; also in puerperal psychosis. There are significant side effects especially acute confessional states and persistent memory deficits for events during the months surrounding the ECT treatment. Proper administration of ECT can reduce potential side effects while still providing for adequate therapeutic effects[16].

All these studies support the effectiveness of ECT as a treatment of first choice in certain psychiatric disorders. Its usefulness has been proved in case of certain treatment refractory disorders[19]. Its importance is still unmatched regarding quick remission in acute disorders where patient and his relatives are facing a crisis situation. Further utility of ECT is as maintenance therapy, in which case, it is very useful for the patients who are chronic cases and suffer from frequent relapses which are not responsive to medicines[20]. ECT is likely to retain its place in the treatment of psychiatric disorders till the time that such medicines are developed which have quick onset of action rather than the lag with present medicines.

Clinical implications and limitations

This study proves that ECT when appropriately administered, is still a useful treatment modality. It is likely to pave the way for further studies on the same subject and to do away with the element of dislike and hesitation in the minds of quite a few psychiatrists regarding ECT and hence will help in appropriate utilization of a good treatment modality, thus benefitting the patients.

There are few limitation in the study: clinical assessment has been depended upon instead of use of various instruments, in the evaluation of response to treatment. Number of patients participating in the study were comparatively less from the point of view of better results.

CONCLUSION

ECT retains its place as a treatment of choice in a narrow range of definite psychiatric disorders such as depression with suicidal features, depression with psychotic features, depression with psychomotor retardation, severely excited manic patients, puerperal psychosis and catatonic schizophrenia. It is an effective treatment modality for therapy resistant manic patients as well. Much additional research is needed into the basis mechanism by which ECT exerts its therapeutic effects. Studies are also needed to better identify subgroups for whom the treatment is particularly beneficial or toxic and to refine the technique to maximize efficacy and minimize side effects. Awareness of general public and those related to medical profession needs to be enhanced about the safety and efficacy of ECT and remove misconceptions so that deserving patients can benefit from a therapeutic tool which at present has gone into background for no logical reason.

Present study has limitations, mentioned in the text. Future studies on this topic can be designed in a better way which are likely to yield more scientifically oriented results.

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CORRECTION

Prof-854.wpd

The amendment of the Professional Vol:13, No.03 (Prof-1008) titled: Augmentation Rhinoplasty on page 349 and 350 is as under;

INCORRECT

ABSTRACT:	**Period :**	**From Jan 2001 to Dec 2002**
MATERIALS & METHODS	**Period :**	**From Jan 2001 to Dec 2002**

CORRECT

ABSTRACT	**Period :**	**From Jan 2001 to Dec 2004**
MATERIALS & METHODS	**Period :**	**From Jan 2001 to Dec 2004**