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Research Article

Quality of life and wellbeing in patients receiving electroconvulsive therapy: a study from Kashmir

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ABSTRACT

Background: Electroconvulsive therapy (ECT) is an effective neurostimulative treatment in psychiatric disorders and is widely used throughout the world except few countries. Studies regarding quality of life and well-being in patients receiving electroconvulsive therapy have not been undertaken in our country. Objective of current study was to study the quality of life and well-being in patients receiving Electroconvulsive therapy.
Methods: 50 patients who have been prescribed pharmacological drugs form the control group and 50 patients already on psychotropic medication who were prescribed electroconvulsive therapy form the case group were taken up for study. Detailed evaluations were carried out clinically and by measurement of Well-being index. Pre-treatment evaluation was carried out one day before Electroconvulsive therapy, and post treatment was carried out at 3 and 7 week. Data were evaluated by means of chi square and Repeat ANOVA, Post hoc Bonferroni correction for within group comparisons applicable.
Results: Mean wellbeing index for study group is 14 which is slightly higher than control (11) ($p>0.001$.) Well-being index of study group is much higher than that of control group at 3 and 7 week post treatment ($p>0.001$).
Conclusions: Sustained effect on quality of life remains in depression up to 7 weeks and in mania it responds rapidly wanes off within 7 weeks. Electroconvulsive therapy improves the quality of life in psychiatric patients.

Keywords: ECT, QOL, Depression, Mania

INTRODUCTION

ECT (Electroconvulsive therapy) is a biological therapy, where seizure are induced under medical supervision by passing electric current across the skull.[1] ECT as a therapeutic tool is used widely in India compared to west. In India 13.4 to 14.3 % clients receive ECT which is much higher than west.[2-4] In India, it a common practise to give ECT in combination with disability appropriate psychotropic medications, right from outset, in an emergency or an augmentation strategy in resistant cases.[5] Controlled studies to delineate the sense of wellbeing, functional liability does not appear to have undertaken in our country. APA (American psychiatric Association) has identified the potential efficacy and safety implication of combination of ECT and psychotropic medication as one of the pressing areas of further research.[6] In the last few years quality of life, has assumed importance in outcome of various psychiatric disorders. The various parameters that are affected in

quality of life are dwelling situation, marital status, occupational status, social interaction. Improvement in quality of life depends on early diagnoses and treatment.[7] There is just one paper that has measured quality of life in schizophrenic patients who received treatment.[7] No study has been conducted to measure quality of life in all major psychiatric patients. McCall et al. (2001)[8] reported improvement in quality of life for period of at least one year in depressed patients and McCall (2004) reported improved quality of life at 2 and 4 weeks, post ECT in depressed patients.[9]

The ECT is firmly established as an effective and safe treatment for mental disorders and its efficacy for acute episodes is unconcealed, it is frequently discontinued after the acute symptoms have remitted. Since psychiatric disorders have protracted course, the continuation of treatment is essential beyond the acute phase. Neuroleptic drugs, antidepressant drugs given in combination with ECT were found to be more efficative.[10.]In view of above; we planned to study if independent variable ECT has any positive or negative affect on quality of life.

METHODS

This study was carried out at Postgraduate Department of Psychiatry (Institute of Mental Health and Neurosciences Kashmir- Center of excellence) of Government Medical College Srinagar which serves to whole Kashmir region, along with some adjoining areas of Jammu and Ladakh region and was conducted over a period of two and half year in hospital. 50 patients who have been prescribed pharmacological drugs form control group and 50 patients already taking psychotropic medication who were prescribed ECT form the case group were taken up for study. The diagnosis of psychiatric disorder was done by consultant psychiatrist according to the criterion given in diagnostic and statistical manual of mental disorders 4th text revision (DSM IV TR)· Informed consent was obtained from each patient; those who were considered incapable of consenting only participated with the consent of their closest family member or custodian. Patients with past history of ECT, Neurological deficit, serious physical illness and mental retardation were excluded from study. Detailed evaluations were carried out clinically and by measurement of Well-being index. Pre-treatment evaluation was carried out one day before ECT (T1), and post treatment was carried out 3 (T2) and 7 (T3) weeks. WHO Well-being index is a ten item scale measuring well-being on a four point scale.[11]

Statistical analyses

Repeat analysis variance with pot-hoc Bonferroni correction out for within group comparison crosses time span. Chi square and t test, paired and unpaired were, used to compare categorical and continuous variables respectively.

RESULTS

Table 1 shows various demographic parameters.

Table 1: Demographic Characteristics of the Studied Patients.

Characteristic		N	%
Age (Yr)	≤ 30	9	18
	31 to 40	24	48
	41 to 50	12	24
	51 to 60	3	6
	> 60	2	4
	mean ± SD	35	
Gender	Male	28	56
	Female	22	44
Dwelling	Rural	27	54
	Urban	23	46
Marital Status	Unmarried	12	24
	Married	35	70
	Widowed	3	6
Occupation	Household	12	24
	Unskilled	17	34
	Semiskilled	11	22
	Skilled	9	18
	Professional	1	2
Family type	Nuclear	29	58
	Joint	11	22
	Extended	10	20
Literacy status	Illiterate	14	25
	Primary	11	22
	Secondary	9	18
	Matric	9	18
	Graduate	6	12
	Postgraduate/ professional	1	2
Family income (Rs)	< 5000	24	48
	5000 to 10000	17	34
	≥ 10000	9	18
Socioeconomic Status (Kuppuswamy Scale)	Lower	15	30
	Upper lower	12	24
	Middle	11	22
	Upper middle	6	12
	Upper	2	4

Table 2, 3 show highly significant wellbeing index at 3 and 7 weeks at post treatment with each group (P=0.001-0.002).

Table 2: Showing WHO well-being index in study group.

	T1	T2	T3		t	DF	P
MEAN	14.0	19.2	20.1	T1vsT2	5.10	98	<0.001**
S.D	6.5	3.05	2.74	T2vsT3	6.04	98	<0.001**
				T1vsT3	1.54	98	>0.05NS

**Highly significant. Repeat ANOVA: T1 T2 T3 F=39.2 P<.01, **Within group comparisonT1 T2 T3 (bonferronis correction P=<0.017)

Table 2: Showing WHO well-being in control group.

	T1	T2	T3		t	DF	P
MEAN	11.6	14	16.2	T1vsT2	3.44	98	<0.002**
S.D	3.77	3.11	2.63	T1vsT3	7	98	<0.001**

**Highly significant. Repeat ANOVA: T1 T2 T3 F=148.6, P<.01, **Within group comparisons T1 T2 T3 (bonferronis correction P=<0.017)

Table 3: Showing WHO well-being index (mean with SD) between the group comparison.

	T1	T2	T3		T	DF	P
Control	11.6 (3.77)	14 (3.1)	16.2 (2.63)	T1	2.24	98	>0.05*
Study	14.0 (6.5)	19.2 (3.05)	20.1 (2.74)	T2	8.3	98	>0.001***
				T1	7.22	98	>0.001***

Table 4: Showing comparison between diagnostic groups (in controls).

	T1	T2	T3
	Mean (SD)	Mean (SD)	Mean (SD)
Mania	20	21	21
Schizophrenia	13 (3.42)	14.9 (3.16)	16.6 (2.15)
Depression	9.92 (3.03)	12.8 (2.46)	16.6 (2.64)

Table 3, 4, 5 shows that mean wellbeing index for study group is 14 which is slightly higher than control. The difference is found to be statistically significant at 5 % level. Well-being index of study group is much higher than that of control group at 3 and 7 week post treatment. The differences were found to be highly significant.

Table 5, 6 also shows progress of ll being in respect of diagnostic category between control and study group. In the study group max well-being is achieved at week 3 and in control in group there is steady well-being till week 7 and trajectory indicates further rises.

Table 5: Comparison between diagnostic group (Study group).

	T1	T2	T3
	Mean (SD)	Mean (SD)	Mean (SD)
Mania	25.1 (2.7)	21.7 (1.58)	21.2 (1.99)
Schizophrenia	15 (3.0)	18.4 (2.79)	20.54 (2.47)
Depression	9.8 (3.25)	18.7 (3.20)	19.6 (3.02)

Table 6: Comparison between diagnostic group.

T1	Mania vs. schizophrenia	T=7.60	Df:20	P<0.001***
T1	Mania vs. depression	T=15.30	Df:35	P<0.001***
T2	Mania vs. schizophrenia	T=6.22	Df:20	P<0.001***
T2	Mania vs. depression	T=2.40	Df:35	P<0.001***
T3	Mania vs. schizophrenia	T=1.53	Df:20	P<0.001***
T3	Mania vs. depression	T=1.60	Df:35	P<0.001***

Well being drops in manic group of study population by T2 and level out. Therefore in lone mania patient of control group remained at same level from start to week 7 (T3) post-treatment.

DISCUSSION

ECT is an effective neurostimulative treatment in psychiatric disorders and is widely used throughout the world except few countries.[1]Misconceptions and negative views regarding ECT among people and medical professional including psychiatrist limit its use.[12,13,14] Most of psychiatrist in India have positive attitude towards combined ECT and pharmacotherapy and is widely used in practise.[2,5] There has been a surprising little information about the short term and long term consequences of combined pharmacotherapy and electroconvulsive therapy, despite the fairly common practise of combining the two treatments in the management of psychiatric disorders in India. To the best of knowledge of the investigator, only one study has been conducted regarding quality of life in schizophrenic patients.[7]

The mean age of patients was 35; while as the mean age for controls was 30.3 years. Patients of our study are much younger than other studies.[8,10,15,16] This might be due to the fact that their sample consisted exclusively of cases of depression. The well-being index of the control and study group show interesting contrasts. In the control group, there is a discernible steady rise till week 7 after treatment, with the trajectory indicating a further rise in the index, while in the study group, there is a sharp rise in index till week 3 and thereafter levels out indicating faster response to ECT combined with pharmacotherapy. This finding could be explained by the fact that our sample consist of mostly of subjects with depression and their quality and life improves and is sustained for up to one year in patients treated with ECT.[9]

Well-being index of study group is slight high at the outset ($p<0.05$) which can be attributed to more cases of mania (N=9).The point of clinical relevance is the finding highly significant increase in well-being of the study group till week 7 post treatment. This finding is in agreement with Mc call et al. (2004).[9]

As clinical recovery in the study group was faster, this improved well-being can be reasonably attributed to the faster recovery of study group. ECT is known to induce faster recovery in comparison to pharmacotherapy alone. Combination of ECT is known to have distinct advantages in speed and quality of response.[17]

The other interesting fact that emerged out of this study is that the high initial well-being index of mania dips towards normal by week 3 post treatment, while low indices of well-being of the cases of depression and schizophrenia rise towards normal by week 3 post treatment. This shows that ECT has a positive stabilizing influence on a sense of well-being. The investigator has not found any particular study, which touches on this particular aspect of quality of life.[9] It is well established fact that ECT reverses new learning defects of psychiatric patients.[18,19] So it can be reasonably inferred that the improved quality of life by week 3 in the study group is due to rapid and effective clinical responses to a combination of ECT and pharmacotherapy. This could be one of the reasons for psychiatrists in India preferring this method of treatment.

Limitations

1) Sample size is small.
2) Clinical progress could have been objectively quantified and correlated to the finding.

CONCLUSION

ECT improves the quality of life in psychiatric patients. Sustained effect on quality of life remains in depression up to 7 weeks and in mania it responds rapidly wanes off within 7 weeks.

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REFERENCES

1. B. N. Gangadhar, N. Janakiramiah, Bindu Menon, P. J. Naga, Venkatesha Murthy. Electro convulsive therapy. In: J. N. Vyas, Niraj Ahuja, eds. Text book of post graduate psychiatry. New Delhi: Jaypee brothers; 1999: 773-782.
2. Agrawal A. K., Andrade C, Reddy M. V. The practise of ECT in India: Issues related to administration of ECT. Indian J of Psychiatry. 1992;34(4):285-97.
3. Shukla G. D. Electo convulsive therapy in a rural teaching hospital in India: British J of psychiatry. 1981;739:569-71.
4. Thompson J. W., Blaine J. D. Use of ECT in United States in 1975, and 1980: American J of psychiatry: 1987;144:557-62.
5. Trivedi J. K. Practise of ECT in India: Indian J of psychiatry: 2002;44(4):313-4.
6. American psychiatric association: practise guidelines for the treatment of patients with major depression: Washington: D.C.; 2000.
7. Garg R, Bir S, Chauvan S, Arun P. Short term efficacy of electroconvulsive therapy in treatment resistant Schizophrenia: Indian J of medical research 2011;133(6):641-4.
8. McCall WV, Reboussin BA, Cohen W et al. ECT is associated with superior symptomatic and functional change in depressed patients after psychiatric hospitalizations' Affect disorders 2001;63:17-25.

9. W. V. McCall, A Dunn, P. B. Rosenquest; Quality of life and function after ECT. British Journal of Psychiatry 2004;185:405-409.
10. Channapattana W and Chakraband M L S. Combined ECT and neuroleptic therapy; Psychiatr. res. 2001;105:107-15.
11. Bech P, Gudex C, Staerhr, John Sen K. The WHO (Ten) Well-being index: Validation in diabetes, Psychotherapy and psychosomatics. 1996;65:4.
12. Down man J, Patel A, Rajput K. Electro convulsive theraphy; Attitude and misconceptions. J of ECT: 2005;21:84-7.
13. Papakosta V, Zervas I, Pehlivanidisa, Papadimitriou G, Papakostas Y. A survey of attitudes of Greek medical students towards electroconvulsive theraphy. J of ECT 2005;21:162-4.
14. Gazdag G, Kocsis N, Tolna J, Lipcsey A. Attitude towards electroconvulsive therapy among Hungarian psychiatrist. J of ECT. 2005;21:204-7.
15. King Han Kho, M F van, Vruswizk, J M J Murre. A retrospective study into memory complaints reported by depressed patients after treatment with ECT and pharmacotherapy and pharmacotherapy alone; J. ECT. 2006;22(3):199-205.
16. Aliza A. Coleman, H. A. Sackem, Jonan Prudicetal. Subjective memory complaints pror to and following Electroconvulsive therapy. Biol psychiatry 1996;39:346-56.
17. Cronholm B, Lager Grem A. Memory disturbances after ECT. Actapsychiatrscand 1959;34:253-310.
18. Cronholm B, Ottoson J. O. The experience of memory function after ECT: Br J of psychiatry. 1963;709:251-8.
19. Royal college of psychiatrists; The ECT Handbook, 1995. Available at: www.ectron.co.uk.

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