KNOWLEDGE AND ATTITUDE REGARDING ELECTROCONVULSIVE THERAPY(ECT) AMONG CONSULTANTS AND POSTGRADUATE RESIDENTS

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ABSTRACT

Electroconvulsive therapy (ECT) is a conventional brain stimulation procedure used to treat psychiatric illnesses. Despite ECT proven efficacy in treating many psychiatric illnesses, its use has been under controversy since the beginning. There is limited literature on attitude and knowledge towards ECT among non-psychiatric medical consultants and postgraduate residents Therefore, we aimed to determine knowledge and attitude towards ECT among non-psychiatric medical consultants and postgraduate residents and compare their responses. In a cross-sectional study we included 74 doctors from all medical and surgical specialities except psychiatry who were consultants including(professors, associate professors and assistant professors) and 76 postgraduate residents at Era's Lucknow Medical College, Lucknow. The knowledge and attitude regarding ECT were observed using a questionnaire composed in light of previous studies. Proportions were compared using chi-square (X^2)test. A two-sided ($\alpha = 2$) $p < 0.05$ was considered statistically significant. Software's MS-Excel and Statistical package for the social sciences version 18 were used for analysis. Internet (52.6%) and movies (32.8%) were the principle source of knowledge among postgraduates residents, however, consultants gather their major part of information from textbooks (56.75%) and published articles (33.78%) while 'psychiatrist colleagues' was the least common in both groups. The most predominant notion among both groups was that ECT causes pain to the patient. A relatively higher proportion of the sample from post graduate student (76%) also believed that ECT is an outdated therapy (57%), causes permanent brain damage (24.7%) and cause memory loss (57.9%) in contrast to consultants who considered it safer and had notion regarding ECT indication and procedure. Significant (p-0.001*) number of participants denied use of ECT as treatment modality for themselves if they had severe depression. Consultants and postgraduates residents from other specialities other than psychiatry had some knowledge about ECT, however they still harbour some negative perceptions and attitudes about the treatment. It would be imperative to educate them as they play a pivotal role in society and their opinion may play a crucial role in correcting public misconstrued perspective about ECT.

KEYWORDS: Knowledge, Attitude, ECT, Consultants, Residents

INTRODUCTION

Electroconvulsive therapy (ECT) first established in the 1930s is a conventional brain stimulation method used to treat psychiatric illnesses. ECT involves brief electrical stimulation of the brain by induction of a seizure. ECT is an FDA approved treatment modality for many psychiatric illness, including treatment resistant major depressive disorder, schizophrenia, catatonia and acute mania (1-2). Also, its use could be life-saving in patients with suicidal ideations and suicide attempts.

However, ECT is an intervention that attracts controversy in spite of its proven efficacy (3). Despite the wide accord over the safety, efficacy and effectiveness of ECT, it still faces negative perceptions and unfavourable attitudes among public and medical students. Previous literature have revealed deficient knowledge regarding ECT among medical students, psychiatric residents, and specialists from other speciality (4-7).One of the reasons behind decreased use of ECT is poor knowledge among medical faternity which further tend to worsen the stigmatization. Other reason may be the undergraduate medical curriculum in India is inadequately preparing medical students to deal with the burden of psychiatric illnesses. A very small amount of time is allotted for Psychiatric teaching and training at undergraduate level. So medical students get very little information about ECT during their undergraduate training period (8-10).

Although, introduction of more effective psychopharmacological treatment has lead ECT being sidelined among medical professionals and general public. ECT is considered as a best treatment option

for patients who require a rapid treatment response and for patients who are resistant to pharmacological treatment in cases of depression and other psychotic disorders. There is lack of knowledge about the modified ECT which is done by administration of muscle relaxants and general anaesthesia. People still believe that patients are given unmodified ECT, which has been completely banned according to Mental health care act 2017. Furthermore, out of all possible limitations, one of the major restrictions for considering ECT use as effective treatment modality is stigma attached to its use among general public (11-14) but possibly due to negative description by the media. Due to the negative stereotype of the method many people are afraid of this treatment. ECT is stigmatized, particularly by the public that view "electro-shock" therapy as a "barbaric" treatment justifiable mostly for extremely violent and uncontrollable patients.

Attitudes of medical consultants towards ECT may be important since they may serve as the most reliable informant for the people to have a second opinion and may play a momentous role in shaping the perceptions of people regarding ECT. The perceptions of psychiatric patients and their families about ECT may be influenced (15-17).

Hence, knowledge and attitudes of these physicians play a major role among the relatives in giving informed consent for ECT procedures of psychiatric patients.

Therefore, we intended to assess the present perspective of medical practitioners regarding ECT as they play a pivotal role in society and their opinion may play a crucial role in correcting public misconstrued perspective about ETC.

AIM

To asess the level of knowledge and attitude of non psychiatric medical professionals including consultants and residents regarding ECT and compare their responses.

OBJECTIVES

1. To compare the Level of knowledge of non psychiatric medical consultants with non psychiatric medical residents regarding ECT.
2. To compare the Attitude of non psychiatric consultants with non psychiatric medical residents regarding ETC.

MATERIALS AND METHODS

Study Design

- Type of study: Single point cross sectional study.
- Study Setting: Department of Psychiatry, ELMC&H, Lucknow
- Study Period : 3 months

METHODOLOGY: STUDY PROCEDURE

This study is an extension of study published in same journal titled as Knowledge and Attitude of Medical Professionals regarding Electroconvulsive Therapy[18] .In the present study the novel aim was to assess the level of knowledge and attitude of non psychiatric medical professionals including consultants and residents regarding ECT and compare their responses. The study was conducted from October 2018 till December 2018.In a cross sectional observational study a total of 150 Consultants with postgraduate degrees and post graduate residents in various medical and surgical departments except department of psychiatry at Era's lucknow medical college who were willing to give informed consent were included in the study.

Those participants who did not give the consent were excluded.

A semi structured proforma were used to collect information regarding socio demographic profile of the participants. A 31 item questionnaire scale was created by the authors of the present study in the light of earlier published literature (5,16,18). The initial 20 questions assess the knowledge and the later 11 questions assessed the attitude regarding ETC. Each question had 3 possible answer 'yes' ,'no' , and 'I don't know'. All respondents were asked to complete the form by themselves.

Assessment of knowledge and attitudes towards ECT was done by emailing or sending the hard copy to the participants and feedback was documented.

STATISTICS

The results were analyzed using descriptive Statistics and making comparisons between treatment groups with respect to growth parameters.

Discrete (categorical) data were summarized as in proportions and percentage (%) while quantitative data were summarized as meanand SD. Proportions were compared using chi-square (x^2) test. A two sided (α=2) p <0.05 was considered statistically significant. Software's MS-Excel and SPSS v 18 were used for analysis.

RESULT

Table 1 show that mean age of the consultants were 30.93 $\pm$ 9.10 years and the mean age of the residents were 27.80 $\pm$ 2.26 years with almost equal respondents in both gender group. Both the study group had similar percentage of participation in 50%. In consultant group 40 were male and 34were female whereas in resident group 34 were male and 42 were female. however, in consultant group, most of the participants were assistant professor (22%).

Variable	Consultant (n=74)	Resident (n=76)
Mean age	30.93 ± 9.10	27.80 ± 2.26
Gender		
Male	40(54.0%)	34(44.7%)
Female	34(45.9%)	42(55.2%)
Designation		
Consultants	N=74	
Professor	21(14%)	
Associate professor	20(13.3%)	
Associate professor	33(22.0%)	
Resident		76 (50.6%)

Table 1: Distribution of Respondents According to Gender and Designation

Table 2 shows that Internet(52.6%) and TV/Movies(32.9%) were the chief sources of knowledge of ECT among postgraduate residents. However consultants rely more on textbook (56.8%) and published articles (33.8%) for their primary source of information while psychiatrist colleagues were the least common. The co relation was found to be significant.(<0.001)

Source of information	Consultant		Resident		chi sq	p-value
	No.	%	No.	%		
Internet	6	8.1%	40	52.6%	92.41	**<0.001**
Movies	0	0.0%	25	32.9%		
Textbook	42	56.8%	7	9.2%		
Published articles	25	33.8%	3	3.9%		
Psychiatrist colleagues	1	1.4%	1	1.3%		
Total	74	100.0 %	76	100.0 %		

Table 2: Distribution of Respondents according to Source of Knowledge

Table 3 shows that significant number of the respondents in both comparing groups had notion regarding indication of ECT i.e used for treatment resistant depression (P-0.023) and is not contraindicated in pregnancy(P-0.034). Secondly, upon comparing it was found that significant number of PG residents thought that ECT causes moderate to severe pain (P-<0.001) and is associated with permanent memory loss (P<0.005).

Surprisingly ,majority of PG residents believed that ECT is an outdated therapy.(p<0.049).

Question	Response	Consultant		Resident		Chi sq	P value
		No	%	No	%		
ECT is used to control violent patients	Yes	50	67.6	42	55.3	2.403	0.301
	No	20	27.0	28	36.8		
	Don't Know	4	5.4	6	7.9		
ECT is dangerous, and may be fatal	Yes	40	54.1	39	51.3	0.502	0.778
	No	31	41.9	32	42.1		
	Don't Know	3	4.1	5	6.6		
ECT has showed significant results in drug-resistant depression	Yes	58	78.4	44	57.9	7.527	**0.023**
	No	13	17.6	28	36.8		
	Don't Know	3	4.1	4	5.3		
ECT is an FDA approved method to treat Schizophrenia	Yes	6	8.1	9	11.8	1.046	0.593
	No	64	86.5	61	80.3		
	Don't Know	4	5.4	6	7.9		
ECT is an absolute contraindication in pregnancy	Yes	11	14.9	23	30.3	6.789	**0.034**
	No	60	81.1	47	61.8		
	Don't Know	3	4.1	6	7.9		

Table 3: Distribution of Respondents According to Knowledge items of ECT

ECT can be used over the age of 65	Yes	22	29.7	17	22.4	2.323	0.313
	No	47	63.5	49	64.5		
	Don't Know	5	6.8	10	13.2		
ECT causes moderate to severe pain	Yes	24	32.4	58	76.3	35.84	**<0.001**
	No	47	63.5	12	15.8		
	Don't Know	3	4.1	6	7.9		
Do you think that ECT causes permanent memory loss	Yes	25	33.8	44	57.9	10.772	**0.005**
	No	44	59.5	25	32.9		
	Don't Know	5	6.8	7	9.2		
ECT can cause permanent brain damage	Yes	15	20.3	18	23.7	1.818	0.403
	No	55	74.3	50	65.8		
	Don't Know	4	5.4	8	10.5		
ECT therapy requires hospital admission	Yes	58	78.4	53	69.7	1.599	0.450
	No	14	18.9	21	27.6		
	Don't Know	2	2.7	2	2.6		
ECT is an outdated therapy	Yes	30	40.5	44	57.9	5.993	**0.049**
	No	40	54.1	26	34.2		
	Don't Know	4	5.4	6	7.9		
ECT can be administered only under general anesthesia	Yes	41	55.4	34	44.4	2.173	0.337
	No	30	40.5	36	47.4		
	Don't Know	3	4.1	6	7.9		
ECT can be done without muscle relaxant	Yes	15	20.3	20	26.3	2.995	0.224
	No	54	73.0	46	60.5		
	Don't Know	5	6.8	10	13.2		
The recommended number of ECT sessions are two or three per week	Yes	43	37.8	21	27.6	2.365	0.307
	No	28	58.1	49	64.5		
	Don't Know	3	4.1	6	7.9		
ECT has been used for the first time in the 1990s	Yes	10	81.1	13	17.1	0.373	0.542
	No	60	13.5	55	72.4		
	Don't Know	4	5.4	8	10.5		
Do you think that ECT is cruel or barbaric	Yes	56	75.7	53	69.7	1.299	0.522
	No	17	23.0	20	26.3		
	Don't Know	1	1.4	3	3.9		

Cont. Table 3: Distribution of Respondents According to Knowledge items of ECT

Do you think that ECT is misused by psychiatrists	Yes	55	74.3	55	72.4	1.289	0.525
	No	17	23.0	16	21.1		
	Don't Know	2	2.7	5	6.6		
Psychiatrists use ECT only as a last resort	Yes	32	43.2	34	44.7	1.437	0.488
	No	40	54.1	37	48.7		
	Don't Know	2	2.7	5	6.6		
ECT should only be used as a final resort	Yes	41	55.4	34	44.7	2.004	0.367
	No	31	41.9	38	50.0		
	Don't Know	2	2.7	4	5.3		
There should be legal restrictions particularly governing the use of ECT	Yes	47	63.5	44	57.9	0.523	0.770
	No	24	32.4	28	36.8		
	Don't Know	3	4.1	4	5.3		

Cont. Table 3: Distribution of Respondents According to Knowledge items of ECT

Table 4 shows that while assessing the attitude of respondents regarding ECT ; it was observed that,69.7% of PG residents and 85.1 % of consultants believed that ECT should not be banned (P-0.021).

Majority of the consultants(45.9%) believed that ECT is more effective as compared to drugs. However 46.1% of residents refused to give consent if they had severe depression and had to undergo ECT.

Question	**Response**	**Consultant**		**Resident**		**Chi sq**	**P value**
		No	%	No	%		
Do you think that ECT should be banned	Yes	6	8.1	19	25	7.708	0.021
	No	63	85.1	53	69.7		
	Don't Know	5	6.8	4	5.3		
I would refer my patients for ECT therapy	Yes	53	71.6	47	61.8	2.258	0.323
	No	16	21.6	19	25.0		
	Don't Know	5	6.8	10	13.2		
I have an ECT treated person in my family or among my contacts	Yes	62	83.8	63	82.9	3.164	0.206
	No	12	16.2	10	13.2		
	Don't Know	0	0.0	3	3.9		
Having knowledge about ECT is essential to practice psychiatry	Yes	9	12.2	7	9.2	1.05	0.592
	No	61	82.4	62	81.6		
	Don't Know	4	5.4	7	9.2		
Having knowledge about ECT will improve the quality of care	Yes	3	4.1	3	3.9	0.092	0.955
	No	67	90.5	68	89.5		
	Don't Know	4	5.4	5	6.6		
ECT should be implemented in all large general hospitals	Yes	58	78.4	56	73.7	0.541	0.763
	No	8	10.8	9	11.8		
	Don't Know	8	10.8	11	14.5		

Table 4: Distribution of Respondents According to Attitude items of ECT

I have a psychiatric illness in my family or my contacts	Yes	34	45.9	25	32.9	2.677	0.262
	No	36	48.6	46	60.5		
	Don't Know	4	5.4	5	6.6		
I would consent to receive ECT	Yes	40	54.1	26	34.2	6.402	0.041
	No	26	35.1	35	46.1		
	Don't Know	8	10.8	15	19.7		
ECT is used more often for treating low socioeconomic patients	Yes	15	20.3	18	23.7	1.948	0.378
	No	46	62.2	39	51.3		
	Don't Know	13	17.6	19	25.0		
ECT is more effective as compared with drugs	Yes	34	45.9	21	27.6	7.329	0.026
	No	24	32.4	25	32.9		
	Don't Know	16	21.6	30	39.5		
ECT is safer as compared with drugs	Yes	18	24.3	18	23.7	0.047	0.977
	No	30	40.5	30	39.5		
	Don't Know	26	35.1	28	36.8		

Cont. Table 4: Distribution of Respondents According to Attitude items of ECT

DISCUSSION

This is a cross sectional observational study about the Knowledge and Attitude regarding Electroconvulsive therapy(ECT) among consultants and postgraduate residents. We included Consultants with postgraduate degrees and post graduate residents in various medical and surgical departments who were willing to give informed consent except for psychiatric consultants and residents. A 31 item questionnaire was provided via mail and hard copy to the participants and feedback was documented.

The Chief sources of knowledge of ECT among consultants were Textbook (56.8%) while movies/TV were the least common.(0.0%) Most of the consultants had obtained knowledge about ECT from textbook. These findings were in harmony with the study conducted by Chakraborty et al. Most of the residents had obtained the knowledge about ECT from Internet(52.6%) and least from psychiatrist colleagues (1.3%).Mass media, particularly internet was the most popular sources of information. This is not surprising, given the increasing importance of technology in knowledge acquisition but is of concern because of the media's largely negative delineations of ECT. Similar results were obtained in study done by Mathews et al(10).

With regards to knowledge and attitude of consultants and residents towards ECT, our study found that the consultants were more knowledgeable and had favorable attitude in comparison to the post graduate residents. Most of the consultants and residents in our study held the common notion and believed that ECT had shown significant results in drug resistant depression. These findings were similar to the study done by Alpak et al (16) where they demonstrated that ECT as an effective treatment modality for psychiatric disorders. Besides, some other studies have established positive attitudes of respondents regarding ECT(17,19,20).That may also be related with their ideas about its effectiveness(21). 85.1%of the consultants and 69.7%of the residents believed that ECT should not be banned. This finding is in contrast to Andrade and Rao who reported that medical students believed that "ECT is cruel and barbaric," "that it is misused," "that it is used to punish aggressive or uncooperative patients," " that it is outmoded," and "that it should be banned." Also, many students thought that the use of ECT should be governed by law.

Significantly higher number of the residents (30.3%) in comparison to the consultants (14.9%) believed that ECT is an absolute contraindication in pregnancy. This difference of opinion may be accepted as a salient finding that is similar to the results of earlier studies, which have argued about problems in medical teaching in psychiatric settings regarding use of ECT in pregnancy (11). Treatment of mental disorders in pregnancy poses a unique clinical challenge due to potential effects also on the fetus from the intervention. ECT Is indicated for patients with severe

psychiatric disorders in the pregnancy period as administration of psychotropic drugs during pregnancy requires great caution and benefits must be weighed against potential risks, especially in the first trimester, so ECT is considered as a safe choice during pregnancy (22-23).

Significant number of post graduate residents also harboured the myths surrounding ECT such as ECT causes mild to moderate pain to the patient(76.1%),ECT causes permanent memory loss(57.9%)and is an outdated therapy(57.9%) No objective facts supports these ideas (24,25). Similar findings were reported by Charkharti et al. in their study where residents believed that ECT is a brain damaging procedure, is unsafe and it impairs the thinking and reasoning of the individual.

In attitude towards ECT in comparison with consultants almost half (46.1%) opined that they would not consent to receive ECT and had refused to accept this treatment modality if they have severe depression with psychosis. However, most of them agreed to refer their patients for ECT therapy but would not consent for ECT It might be because they are frightened for accepting ECT as treatment modality for themselves. Other reason would be lack of knowledge among the residents regarding ECT which tend to worsen the stigmatization. This was further substantiated by the fact that 39.5% of residents did not knew that ECT is more affective as compared with drugs. ECT is often considered the best option in treatment of depression, particularly for depression with psychotic or catatonic features refractory to pharmacotherapy and psychotherapy because of its potential for rapid alleviation of symptoms. It is also considered as a first line treatment option for patients requiring a rapid antidepressant response and for patients who have previously shown a positive response to ECT (23,24).

CONCLUSION

Consultants and postgraduates residents from other specialities other than psychiatry had some knowledge about ECT, however they still harbour some misconceptions and negative attitudes about the treatment. It would be imperative to educate them as they play a pivotal role in society and their opinion may play a crucial role in correcting public misconstrued perspective about ECT. Hence, faculties in medical colleges should start both theory and practical classes for students regarding the use of ECT and its implications. Practical work in psychiatry should be encouraged as it is more useful in reducing negative perceptions toward the use of ECT rather than the use of theoretical knowledge.

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