

# The Indications of Electroconvulsive Therapy in Pakistan

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## ABSTRACT

**Objective:** To determine the indications and contraindications of electroconvulsive therapy (ECT) among psychiatrist working in Pakistan.

**Study Design:** Cross-Sectional Study.

**Place and Duration of Study:** This study was conducted at the Department of Psychology DOW International Medical College, Karachi, from May 2013 to May 2014.

**Materials and Methods:** A semi structured questionnaire was mailed to Psychiatrist through emails, the questionnaire consisted of questions and the participants were required to choose one out of five responses of each question. It measured the issues that were pertinent to our use of ECT covered aspects of its use in its indications and contraindications and frequency of use. It has been used as second line treatment option in majority of cases. It has been used with success in mood and psychotic disorders.

**Results:** The use of ECT was frequent total of 75% patients and majority showed improvement in their clinical condition Its practice must comply with pre anesthetic assessment to prevent any post ECT complications. There is no absolute contraindication but risk factors like raised intracranial pressure.

**Conclusions:** ECT is an effective non pharmacologic biological treatment and predominantly for depression, but also for schizophrenia. The practice of ECT is frequent in our country.

**Key Words:** Electroconvulsive Therapy, Mood Disorders, Schizophrenia

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## INTRODUCTION

There has been different studies, internationally, based on surveys conducted to know the patterns of ECT use by psychiatrists in their practice. To our knowledge, research on this issue has not been conducted on this issue in our country. This study conducted highlighted the indications and contraindications of ECT in practice in our country.

The use of ECT has been introduced by Carletti and Bini in 20th century. ECT treatment consists in passing a small amount of electric current between electrodes placed on the temples. The current is of such strength that a major convulsion ensues<sup>1</sup>. This sounds much more alarming than it is. And while to throw a patient into convulsions is an extraordinary form of treatment, it can also be a safe and effective<sup>2</sup>. But its use for treatment of Psychiatric disorders has still been controversial. Studies have shown Safe use of ECT in adults and in older ages<sup>3</sup>. The American Academy of Child and Adolescent Psychiatry has published parameters for use of ECT in adolescent populations<sup>4</sup>. Research has documented effective use of ECT in mood and psychotic disorders, catatonia, and intractable seizures<sup>5</sup>. ECT has been found to be safe and effective

in severe life threatening depressive disorders as a first-line treatment and a second line treatment for patients with major depressive disorder who do not respond or respond incompletely to antidepressant drugs<sup>6</sup>.

Apart from the principle of not to be given in conditions not suggested as indications only few contraindications of ECT<sup>7</sup>. A few physical contraindications are hypertension, old coronary thromboses, healed or active tuberculosis, peptic ulceration, malignant disease, advanced Parkinsonism, disseminated sclerosis<sup>8</sup>. Psychological contraindications are hysteria with no depression and personality disorders. Despite such debate, ECT is being used in all over world including the United States and endorsed by the professional associations in America<sup>9</sup>, Austria, Canada, Australia, Denmark, Netherlands, Germany, and India have guidelines for its use<sup>10,11</sup>

## MATERIALS AND METHODS

It an internet email based questionnaire survey. A semi structured questionnaire was mailed to Psychiatrist through emails address found in directory of Pakistan Psychiatric Association. Inclusion criteria: total 230 qualified and practicing psychiatrists were included belonging to both genders. Those who refused to participate or in study or were not qualified in psychiatry were excluded from study. Non practicing Psychiatrist were also excluded from the study. The demographic variables like age, gender, city of

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residence, working place and clinical experience of the participants were also recorded by using a proforma designed for the purpose. The questionnaire consisted of questions and the participants were required to choose one out of five responses of each question. It measured the issues that were pertinent to our use of ECT covered aspects of its use in its indications and contraindications and frequency of use. To facilitate the responders, the questionnaire was sent online (by e-mail) to psychiatrists all over the country. Ethical consideration was done. Anonymity and confidentiality was maintained.

The response was assessed and analysis was done through SPSS version 17.

## RESULTS

Those not responding and incomplete response were not included for analysis. Total responses (n= 122)

Both genders responded with major responses from male Psychiatrist.

ECT was used as first line treatment option by only (n=22) 18.2% of the psychiatrist while (n=54) 44.3% used it as second line option while (n=46) 37.5%.use as last remedy. The table 1 shows the pattern of use of ECT in clinical practice by those responded.

The table 2 shows the indications and contraindications of pattern of use of ECT.

**Table No.1: The use of ECT in clinical Practice**

The use of ECT in clinical Practice?	N= 122
a) Rarely	36 (29 %)
b) Less frequently	52 (43 %)
c) Frequently	23 (19 %)
d) Very frequently	1 (09 %)

**Table No.2: Indications and Contraindications in use of ECT (n=122)**

Common Indications to use ECT	N	%age
Depression	84	65.4
Mania	14	13.2
Post-Partum	5	5.9
Schizophrenia	14	11.8
Other Indications	5	3.7
<b>Contraindications (N=63)</b>	<b>63</b>	<b>100%</b>
None	10	16.2
Epilepsy	4	6.1
Intracranial pathology	32	50.5
Fractures	6	10.0
Pregnancy	11	17.2

## DISCUSSION

Electroconvulsive therapy (ECT) is well established as a safe and effective treatment for several psychiatric disorders. Responsiveness to ECT does not decrease with age, as indicated that the use of ECT in the treatment of psychiatric disorders. On average eight s ECT was administered per patient.(range, 1-16)<sup>12</sup>. This is similar to findings of study conducted in Asian countries where 7 was mean number of ECT given. It was frequent practice in more than 2/3rd of psychiatrist<sup>13</sup>. The use of ECT was frequent total of 75% patients and majority showed improvement in their clinical condition<sup>14</sup>.

Extent of use of ECT was limited as first line treatment option by only (n=22) 18.2% of the psychiatrist while (n=54) 44.3% used it as second line option and (n=46) 37.5%.use as last remedy. It is similar to the survey conducted in USA in different time periods<sup>15</sup>.

In our study depression was the main indication which is found to be similar to study conducted in a tertiary care hospital of Pakistan<sup>15</sup> and studies conducted in Asian as well as western countries. But other surveys including one conducted in New Zealand and North west England findings showed the most common indication was Schizophrenia<sup>16,17</sup>

Contra indications were similar to those found in other studies with Intracranial pathology in 50% and pregnancy to follow. There are no absolute contraindications for ECT. In fact, ECT is often used in patients suffering from medical illness due to its rapid therapeutic onset and relative safety<sup>18</sup>. All patients should undergo thorough pre-ECT. A dental assessment is indicated due to stimulation of jaw musculature by ECT. While not required in all patients, brain imaging studies may be indicated in patients with a sudden, change in their mental status, or who have notable cardiovascular or cerebrovascular risk factors<sup>19</sup>. There was no absolute contraindications for applying ECT similar to findings of APA guidelines except for anesthesia contraindications<sup>20</sup>.

## CONCLUSION

ECT is an effective non pharmacologic biological treatment and predominantly for depression, but also for schizophrenia. The practice of ECT is used frequently in our country.

**Conflict of Interest:** The study has no conflict of interest to declare by any author.

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