

The Role of Electroconvulsive Therapy in General Hospital Psychiatric Inpatients Treatment in Baghdad.

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Abstract

Background: Despite the controversy about the role of electroconvulsive therapy (ECT) it is still widely used in the treatment of some psychiatric disorders.

Objectives: The aim of the study is to identify characteristics of the psychiatric inpatients and the role of ECT in the treatment of their disorders.

Methods: Medical records of all inpatients admitted to Al Kadhymia teaching hospital; psychiatric unit were studied carefully. A special form was designed to collect the data. Diagnosis was made according to the International Classification of Diseases, the Tenth Revision (ICD-10).

All the patients were examined physically.

Results: The 145 inpatients included were 76(52.4%) males and 69(47.8%) females with age distribution of 17-75 years. Males were younger than females and 64.7% of the total sample was under the age of 40 years. Average duration of admission was 4.6 weeks.

Schizophrenia made the most frequent diagnosis (41.4%) followed by depression (25.5%) and Mania (7.6%). All patients

received psychosocial and psychotropic treatment. Only 13 classical medicines were used.

ECT was received by 42% of the sample. There was higher numbers of males who received ECT than females and the difference was significant. There was no association between ECT and age. Only 5 patients aged between 60 and 66 years and 4 of them aged 17 years had ECT.

The primary usage was for Schizophrenia which represented 69% of ECT recipients followed by depression (23%). It was significant that males received ECT more than females.

Conclusion: The findings suggest that majority of the inpatients can be treated with medications alone but still there is high rate of using ECT for many different disorders including schizophrenia.

Key words: ECT, Psychiatry, inpatients

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Introduction

ECT is a therapeutic procedure in which a tonic clonic seizure is induced by electrical stimulation of the brain. Electroconvulsive therapy (ECT) has a very important role in the treatment of many psychiatric disorders, especially depression⁽¹⁾. It has been employed in the treatment of schizophrenia in combination with antipsychotic which is more beneficial than either alone⁽²⁾. Since being introduced in Italy in 1938, its mode of action has still not been clarified⁽¹⁾.

Treatment modalities have changed in many ways. Although modified ECT under general anesthesia is performed in most developed countries, still unmodified ECT is used in some places of the world^(1, 3, 4). The rate of use of ECT among psychiatric inpatient ranged from 0.6% to 25%^(5, 6). Among inpatients ECT was performed more to females than males⁽⁷⁾. Most patients who were treated by ECT were 25-40 years old. Very few were above 60 years old⁽⁸⁾. Diagnostic categories were variable. While affective disorders were the most common diagnostic category among inpatients treated by ECT in most centers, schizophrenia was the most common category in others^(9, 10, 3). ECT was

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especially used for treatment of depression disorder that is resistant to conventional treatments such as drugs or psychotherapy⁽¹¹⁾. The variability in modality of administration, rate of use and diagnostic categories was related to scope of availability of anesthetic service for psychiatric units, multiple including new drugs availability and level of development of the service i.e. presence of adequately trained staff and quality of units^(4,6,8,11). Although the general trend in developed countries is to less use of ECT, the rate is increasing in some developed centers because of pressure of cost of psychopharmaceuticals and other forms of treatment⁽¹²⁾. In one study it was found that the attitudes of treating doctors in a developed center were very positive about using ECT but it was not used because of the negative attitudes of the staff and pressure of social and political stereotypy about use of ECT⁽¹¹⁾.

The aim of the study is to identify the demographic characteristics of psychiatric inpatients in Al Kadhymia teaching hospital and their treatments and the indications of ECT in that treatment.

Patients and Methods

All the patients admitted consecutively to the psychiatric ward of the Teaching Hospital of Al-Nahrain College of Medicine in Al-Kadhymia, during three months period (from 7 February to 7 April 2002) were evaluated.

The hospital is located in the north west of Baghdad involves a psychiatric ward with 25 beds and outpatient clinic and run by two specialist psychiatrists.

Patients were referred to the psychiatric unit by psychiatrists from outside the hospital or by physicians of other different medical specialties. Some of the inpatients were either self referral or brought up by their relatives. During the time of the study

there was no compulsory admission and there was no mental health act. In general most of the admitted patients represented the severe cases which could not be treated as outpatients.

The study was retrospective. The medical records of all the patients admitted during the study period were reviewed carefully. Information related to sex, age, diagnosis and type of treatment were collected in a special form and diagnosis was made according to the International Classification of Diseases, Tenth revision (ICD -10)

Exclusion criteria was that patients who left the hospital early before completing their treatment by premature self discharge and those who had deficient information in the records.

All the patients were exposed to medical examination and investigations; including ECG, blood test and X-Ray, which were done routinely. Some patients who had physical problems were referred to specialist physicians for treatment. Fitness for electroconvulsive therapy (ECT) was approved for some patients. The type of ECT used was bilateral and unmodified. Number of ECT sessions was between 4 and 6 sessions. The policy of the psychiatrists working in the hospital that ECT was only given to inpatients. A written consent was taken from the patient or his close relatives.

Simple statistics was used for data analysis.

Results

The evaluated sample included 145 patients; 76 (52.4 %) males and 69 (47.4 %) females. Age distribution was from 17 to 75 years with an average of 35.4 years (mode=37.5) for the total sample, 33.8 years (mode=28) for males and 37.2 years (mode=47.5) for females.

Table 1, shows the distribution of the age of the sample. Patients under the age of 40 years represented 64.7% of the inpatients. Males were younger than females, as they formed 75% of the inpatients under the age of 40. (Table 1)

The duration of admission to hospital ranged between 3 to 16 weeks with average duration of 4.6 weeks.

The final diagnosis of patients was done according to the International Classification of Diseases 10th.Revision (ICD 10)⁽¹³⁾ as illustrated in table 2. The most frequent diagnosis was schizophrenia (41.4%) followed by depression (25.5%) and mania (7.6%). (Table 2)

In relation to gender, there was statistical significant association between males and schizophrenia ($X=6.5$, $d.f1$, $P< 0.05$) while no such relationship was found between sex and depression despite the apparent increase of females (14.5%) over males (11%). ($X=1.65$, $df1$, $P>0.05$).

Received Treatment:

In addition to the psychological, social, and other treatments there were two main physical therapies; psychotropic drugs and electroconvulsive therapy (ECT).

i. Psychotropic Medications:

All the inpatients received psychotropic medications, which involved only 13 types of the classical drugs according to their availability during the time of the study due to the UN Sanction on Iraq. The most common drugs for males were chlorpromazine while diazepam was commonly used for females according to diagnosis. (TABLE 3)(Some patients had more than one diagnosis so the total here is 442)

ii. Electroconvulsive therapy (ECT):

Out of the total sample, 61 patients (42%) received ECT while the rest of them were treated by medications and other therapies only.

There was higher percent of males who received ECT (64%) than females (36%). However half of the females (56%) were never treated by ECT i.e. only 32% of the total female number and 51% of the total male number received ECT. That was statistically significant ($X=5.6$, $df1$, $P<0.05$). Table 4, shows the distribution of age and sex of patients with and without ECT.

For the sake of statistical comparison between age groups of the patients and its association with sex, the sample was divided into two groups i.e. those below and over 40 year old. Results showed that there was no significant association between age group and ECT use. ($X=2.46$, $df1$, $P<0.05$).

Only 5 inpatients (4 males and one female) aged 60- 66 received ECT. That treatment was given to only one male aged 17 and three females aged 18.

Indications of ECT:

ECT was mainly used for schizophrenia; paranoid, catatonic and disorganized types. Schizophrenia represented 69% of ECT recipients while 23% of them were depressed and only 8% of them had mania and primary sever anorexia nervosa complicated with depressive stupor. Seventy percent of the schizophrenic patients received ECT. (TABLE 5)

Statistical analysis showed that ECT was used for patients with schizophrenia more than those with depressive disorders and the difference was statistically significant. ($X=9.7$, $df1$, $P<0.05$).

The same significant association was found among gender, schizophrenia and ECT; as ECT was given more to males (64.3%) than females with schizophrenia ($X=6.6$, $df1$, $P<0.05$). Such association was not significantly recognized in depression ($X=1.8$, $df1$, $P>0.05$).

Table 1: Age distribution of the Sample

Age Groups(years)	Males		Females		Total	
	N	%	N	%	N	%
<19	7	5	3	2	10	7
20-29	32	2.2	19	13	51	35
30-39	18	12.4	15	10.3	33	22.7
40-49	6	4	17	12	23	16
50-59	8	5.5	12	8.3	20	13.8
60>	5	3.5	3	2	8	5.5

N= 145

Table 2: Psychiatric Disorders (ICD-10) of the Inpatients

Psychiatric Disorders	Males	Females	Total	
	N	N	N	%
Dementia	1	1	2	1.4
Alcoholism	5	-	5	3.4
Drug Abuse	-	1	1	0.4
Schizophrenia	39	21	60	41.4
Delusional	-	3	3	2
Schizo affective	-	1	1	0.7
Depressive episode	16	21	37	25.5
Mania	9	2	11	3.6
Generalized Anxiety	1	3	4	2.8
Panic Disorder	1	2	3	2
Obsessive Compulsive	-	1	1	0.7
Dissociative- Conversional	1	6	7	4.8
Somatoform	2	2	4	2.8
Anorexia Nervosa	-	2	2	1.4
Personality Disorder	2	1	3	2.1
Temporal Lobe Epilepsy	1	-	1	0.7
Total	76	69	145	100

N= 145

Table 3: Psycho tropics used in the treatment of Inpatients

Drugs	Males	Females	Total	
			N	%
Anxiolytics				
Diazepam	25	45	70	12.8
Chlordiazepoxide	6	8	14	3.2
Lorazepam	5	6	11	2.5
antidepressants				
Imipramine	21	38	59	13.3
Amitriptyline	3	5	8	1.8
Chlomipramine	3	4	7	1.6
antipsychotics				
Chlorpromazine	57	37	94	21.3
Trifluoperazine	22	10	32	7.2
Thioridazine	10	15	25	5.7
Haloperidol	8	6	14	3.2
Fluphenazine Deca.	25	15	40	9
Antimascarinics	37	20	57	13
Carbamazepine	6	5	11	2.4
Total	228	214	442	100

Table 4: ECT Use association with age and sex of Inpatients

Sex	ECT USE	Age Groups						Total
		>19	20-29	30-39	40-49	50-59	60>	
Males	ECT	4	15	12	1	3	4	39
	NO ECT	3	17	6	5	5	1	37
Females	ECT	1	3	4	3	5	1	22
	No ECT	2	11	11	14	7	2	47
		10	36	33	23	20	8	145

Table 5: Psychiatric disorders treated with and without ECT

Psychiatric Disorders	With ECT			Without ECT			Total	
	Male	Female	Total	Male	Female	Total	N	%
Schizophrenia	27	15	42	12	6	18	60	41.4
Depression	8	6	14	8	15	23	37	25.5
Mania	4	-	4	5	2	7	11	7.6
Complicated Anorexia Nervosa	-	1	1	-	1	1	2	1.4
Others	-	-	-	12	23	35	35	24.1
Total	39	22	61	37	47	84	145	100

Discussion

The findings of this study have some similarities and differences with other studies. First of all that although most inpatients can be treated by drugs alone, the rate using ECT among inpatients is higher than that which is reported in most literature^(5,6). Explanation is that in the period during which the study was performed there was very gross deficiency of drugs in the country caused by the economic sanctions. Most drugs used are of conventional types. New drugs were hardly available. Even old drugs were sometimes not available. This made the treating psychiatrist in critical situation for treatment of sever cases with disturbed behavior that needed admission so ECT became an easy available mode of therapy. Other explanation is that families of patient who perform most nursing function and accompany patients in the wards do not tolerate long period of stay in hospital. In this case treating doctors will resort to using ECT in treatment to shorten period of recovery. The second point is the diagnostic categories. In this study schizophrenia was the most common category treated by ECT while affective disorders were more commonly treated by ECT according to many most literatures^(9,10). The same problems of drugs and inability to keep patients for long periods in wards may be taken as explanation. Because cases of schizophrenia present more with agitation and disturbed behavior than affective disorders then ECT was performed more for schizophrenia to control behavior in short period while there was such deficiency of drugs. Most of cases of affective disorders in this study were those of depression that can be treated with drugs alone because such cases are not usually associated with disturbed behavior and there is no urge for using ECT for them except complicated cases or

when there is risk of suicide. In fact the most common rate of admission found in this study is for schizophrenia. While this indicate another explanation for the high rate of use of ECT found in this study ,it gives clue that admission to psychiatric unit is kept more to cases with disturbed behavior while other less sever cases such as those with depression can be treated and tolerated at home . Males were more treated by ECT than females while the reverse was found in most studies ^(7, 9, 10). In these studies affective disorders specifically resistant depression was the most common diagnostic category treated by ECT. Depression is more common in females and this explain the difference in gender for use of ECT between this study and other studies^(9,10). Some studies had same results to this study and interestingly these studies are done in developing countries that may suffer of same problems of deficiency of drugs and lack of well trained and enough staff to control sever cases without use of ECT ^(3, 4, 8). This study need to be replicated again after improvement in drug availability nowadays

There is high rate of using ECT among psychiatric inpatients in general hospital in Baghdad. Schizophrenia was most common indication for ECT and this treatment is uses more for males than females. Deficiency of drugs and lack of trained staff is considered responsible for such high rate of use of ECT.

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