Originals

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Mean hospital stay and treatment with electroconvulsive therapy

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Introduction. The objective is to analyze if the mean hospital stay is less than the episodes or not in which electroconvulsive therapy (ECT) is applied.

Methods. With a retrospective design, we studied a sample of 30 patients in whom ECT was applied between 1996 and 2001. These patients were suffering a disorder for which ECT has been shown to be effective (schizophrenia, bipolar disorder and major depression). Each one of the episodes (n = 185) of these patients was studied, comparing the length of stay in the hospital in these patients in which ECT was applied (n = 135) with those where it was not (n = 50). Statistical analysis was carried out by non-parametric Mann-Whitney-U tests. The descriptive level of statistical significance was established at p < 0.05.

Results. This work shows statistically significant differences between the treatment groups (p = 0.000), the length of stay being longer when ECT is applied.

Key words: Electroconvulsive therapy. Efficacy. Length of stay.

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Estancia media hospitalaria y tratamiento

con terapia electroconvulsiva

Introducción. El objetivo es analizar si el tiempo de estancia media hospitalaria es o no menor en los episodios en los que se aplica terapia electroconvulsiva (TEC).

Métodos. El diseño del estudio es observacional retrospectivo. La muestra es de 30 pacientes con un trastorno para el que se ha demostrado la eficacia de la TEC (trastornos esquizofrénicos, trastornos bipolares y depresión mayor). A estos pacientes se les practicó TEC entre los años 1996 y 2001. Se han estudiado cada uno de los episodios (n = 185) de estos pacientes comparando el tiempo de estancia media de los episodios en los que se practicó TEC (n = 50) con los que no se practicó (n = 135). Se utilizó la prueba no paramétrica de la U de Mann-Whitney. Se estableció la significación con una p<0,05.

Resultados. Este trabajo encuentra diferencias estadísticamente significativas entre los episodios (p = 0,000), siendo más larga la estancia cuando se practica TEC.

Palabras clave: Terapia electroconvulsiva. Eficacia. Tiempo de estancia.

INTRODUCCIÓN

Efficacy of ECT in the different disorders

In the treatment of patients with psychotic depression, ECT effectiveness may be superior in relationship to the patients affected by depression without psychotic symptoms¹.

In spite of the previously commented data, a recent review concludes that controlled studies comparing ECT and antidepressive treatments in the elderly population affected by depression are necessary to elucidate the greater or lesser efficacy of one treatment over another². Other study groups performing a meta-analysis suggest the greater efficacy of ECT³.

In regards to the treatment of mania, ECT is effective and rapid in controlling these episodes in bipolar patients^{4,5}. It has also been suggested that it is the best treatment in regards to greater improvement when compared with lithium⁶. It is also effective in mixed episodes⁷.

Speed of response in treatment with ECT

In the treatment of depression, one of the fundamental objectives is to obtain a fast response. It has been seen that rapid action onset may also be related with antidepressive efficacy^{8,9}.

Comparing three types of therapy, sleep deprivation, electroconvulsive therapy and drug treatment, in the onset

of antidepression action, it was observed that response was faster for the first one, followed by ECT and then by drug treatment¹⁰.

Safety

ECT is a safe technique. Its practice in adolescent populations has not been extended, however, its use manifests that it is well-tolerated and that side effects such as spontaneous seizures are rare. Memory loss is more frequent but there is recovery in a few weeks¹¹. It is proposed that it has the same indications as in the adult, precisely due to this efficacy and safety¹², although the lack of systematic studies makes it advisable to act cautiously in this population¹³. In very elderly patients, it has also been shown to be a safe technique¹⁴.

ECT has been used in patients who have suffered closed cranioencephalic traumatism, studying its efficacy and safety in the treatment of psychiatric disorders. A study with a series of cases manifests that no cognitive adverse effects occur in these patients¹⁵. In the same way, maintenance treatment with this technique proposes its use based on its long term efficacy and safety¹⁶.

Reluctance to use ECT

ECT is a controversial treatment and both the general population as well as medical specialists have prejudices in regards to its use. Furthermore, it is a treatment that is not frequently considered and is probably underused^{17,18}.

Mean stay time

An attempt has been made to reduce the stay time in an acute psychiatry unit, as in any admissions unit, seeking two objectives. The first one is the improvement of the patient, avoiding the possible iatrogeny derived from a prolonged hospitalization. The second is to reduce costs. The ECT, as has been previously commented, is a rapid and effective treatment and it can be supposed that the stays of patients subjected to this treatment would be less. A review on the practice of this technique in a hospital showed that the stay time was greater in the patients in whom the ECT had been used¹⁹. Based on the fact of backgrounds with more hospitalizations, this study suggests that the reason could be because these patients were more serious²⁰. In addition, there is a tendency to use ECT in patients who, for different clinical and sociodemographic factors, are more serious²¹. However, in another study in which subjects with different psychiatric disorders, schizophrenia, mania, depression and schizoaffective disorder were compared between electroconvulsive and drug treatment, less hospitalization time was found in the patients who had ECT when counting from the time when this treatment was initiated²². The same result was found in a study performed on mania²³. One of the causes that may lead to a longer time in the hospitalization duration of patients who receive ECT is that cognitive disorders that delay its application may be produced, above all in elderly patients²⁴.

The hospitalization time has been studied in patients suffering depression, observing that this was less when electroconvulsive therapy was applied²⁵, although other authors do not obtain the same results, finding that the hospitalization time is not reduced when treatment with ECT is administered early²⁶.

A study in which treatment with ECT before and after creating a specific ECT service was compared observed that the patients who are treated with ECT before and after this Service had a shorter mean stay time, that the number of patients treated with ECT increased, but the number of ECTs administered was the same²⁷.

In relationship to the treatment costs with ECT, it is more expensive²⁸, although there are few studies that evaluate this aspects of the treatment. However, according to the results of the study shown above, it is likely that a more specialized application could reduce these costs.

To conclude from all that stated, it is suggested that ECT is an effective, rapid and safe treatment in the different age populations as well as in different diseases. It is not clear if applying ECT reduces the mean stay time or, to the contrary, increases it. It is also not clear if costs are reduced.

The objective is to analyze whether the mean stay time is lower when ECT is applied in the hospitalization episode.

MATERIAL AND METHODS

Design: open label, observational and retrospective study.

The sample is made up of the hospitalization episodes per patient performed during a 5 year period (1996-2001), with the following inclusion criteria: patients in whom ECT was performed in some of their hospitalizations in the last 5 years





(1996-2001), who have a disorder for which the efficacy of ECT has been approved (schizophrenic disorders, bipolar disorders and major depression).

Two groups of hospitalization episodes are defined: hospitalization group in which the ECT has been performed and hospitalization group in which ECT has not been performed.

Two groups were formed from a sample of patients who had received ECT in some of their hospitalizations in the last 5 years (1996-2001) and who had a diagnosis of schizophrenic disorder, bipolar disorder or major depression, a group of disorders for which the efficacy of ECT has been demonstrated. The first group was formed by admissions in which ECT was administered and a second group was formed by those in whom the ECT has not been administered.

Table 1	Mean stay from hospital admission				
	Ν	EM	Standard dev.		
With ECT	50	51,9	39,9		
Without TEC	135	29,9	35,4		
Mann-Witney U: 1.925; p = 0,000.					

The sociodemographic and clinical variables are described and the means and standard deviations of the stay time in both groups are calculated. The non-parametric Mann Whitney U test is used to compare the means.

The mean stay time of all the episodes with ECT is compared with the mean stay time of the episodes in which ECT was not performed.

The mean stay time of all the episodes with ECT from the time when the ECT sessions are begun is compared with the mean stay time of the episodes in which ECT has not been performed.

RESULTS

The number of total episodes for a sample of 30 patients was 185. Of these, 50 had ECT and 135 did not. The characteristics of the patients are shown in figures 1, 2 and 3.

The mean stay for the ECT group was 51.92 days, with a standard deviation of 39.92 and 29.90 days for the non-ECT group with a standard deviation of 35.40. Both mean stays showed a statistically significant difference (p=0.000) (table 1).



Distribution by age groups

Table 2	Mean stay from the onset treatment			
	Ν	EM	SD	
With TEC	50	28,46	24,89	
Without TEC	135	29,9	35,4	
U de Mann-Witney: 3.094,50; p = 0,386; SD: standard deviation.				

If, however, we use the mean stay from when ECT is initiated, a mean of 28.46 (p = 0.386) is obtained, not showing significant differences with the mean stay for the non-ECT group (table 2).

CONCLUSIONS

This study finds statistically significant differences between the episodes, the stay being longer when ECT is performed.

If we make the comparison with the mean stay time from the performance of the first ECT session, no statistically significant differences are detected.

DISCUSSION

These results could be explained by: in the first place, the exploratory tests prior to the onset of the ECT application may be the reason why the mean stay is greater in episodes with ECT. It can also be argued becau-se it is often not used as treatment of first choice and there is some time delay, testing a drug treatment, until the decision to use ECT is taken. The variable response to treatment could not be measured and thus it is not possible to know if their depressive episode is less serious or the remission is less in patients in whom ECT is not performed. Thus, it is necessary to study the psychopathological state of the patients in one episode or another, and to know if the seriousness is different as well as to quantify the response to treatment and the conditions in which the discharge occurs.

Finally, these data need to be complemented with studies on the rate of subsequent re-admissions and the yearly stay days in the hospital.

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