



# Revista de Psiquiatría y Salud Mental

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## EDITORIAL

### Dignifying Electroconvulsive Therapy based on evidence<sup>☆</sup>



### Dignificando una terapia electroconvulsiva basada en la evidencia

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The electroconvulsive therapy (ECT) is one of the treatments that have received more qualifying value judgements in the field of psychiatry and probably all medicine. Besides the polemics and after 80 years of history, it is still considered nowadays controversial but reliable, effective, long-standing and valid. This treatment saves lives but its availability is still changeable and unequal, even though its pattern of use remains constant or increases in some places.

Adequate training, education and accreditation of psychiatrists and other medical professionals, particularly anaesthetists and mental health nursing staff, are essential to dignify a treatment that was stigmatised and is stigmatising even nowadays, and to guarantee access to what could be vital for some patients. In the last years, there has been definite progress in this field. There is regulated training available in various Spanish communities (a total amount of eight periodic courses today). Guidelines for the accreditation of services or units of ECT have been implemented, which safeguard technical, ethical and legislative suitable

standards. Guidelines such as NICE,<sup>1</sup> the British ECTAS (ECT Accreditation Service),<sup>2</sup> the Scottish SEAN (Scottish ECT Accreditation network)<sup>3</sup> or the recent Catalan guideline (Guideline of clinical good practice about electroconvulsive therapy)<sup>4</sup> have given recommendations, positioning and standards for the practice and the accreditation of the treatment and the professionals responsible for the intervention.

The evidence at a Spanish level goes back to the beginning of the 1990s with the first description of the situation in the city of Barcelona.<sup>5,6</sup> In 1999, the Spanish consensus on ECT<sup>7</sup> was reached among professionals of various fields. Since then, the pattern of use has been standardised although there are citizens who have many additional possibilities of receiving the treatment according to their geographic area of registration.<sup>8,9</sup>

In Spain, there are only published data of Catalonia which inform that around 1000 people receive treatment throughout a year.<sup>4,10</sup> At the moment, a wide descriptive study is being carried out and it will be soon published. In the United States, it is estimated that about 100,000 patients receive treatment in the same period and about 1,000,000 people receive it around the world.<sup>11,12</sup>

For years, the ECT has been a regulated and defined treatment with the objective of being applied to standardised and good clinical practice conditions. The main scientific societies have taken their stance about this

<sup>☆</sup> Please cite this article as: Bernardo M, Urretavizcaya M. Dignificando una terapia electroconvulsiva basada en la evidencia. Rev Psiquiatr Salud Ment (Barc.). 2015;8:51–54.

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matter (APA,<sup>13</sup> RCP,<sup>14</sup> SEPB,<sup>7</sup> WPA<sup>15</sup>) and how to make the treatment safe, adequate and as respectable as possible. Since the first edition of the guideline of the American Psychiatric Association (APA) in 1990, concrete and ambitious objectives have already been defined, which included recommendations about the treatment, education, training and the optimisation of the ECT.

This positioning made by the most relevant psychological organisations about ECT is not usual in other treatments. It has been motivated by its former storm of controversy and stigma, which converted it into the current regulated and structured therapeutic intervention. Nevertheless, there is high variability in its pattern of use. Different factors can contribute to these variations, such as misinformed beliefs of citizens and professionals about the treatment, the lack of agreement regarding its use, in addition to a certain degree of nihilism and, why not, negligence by the psychiatrists themselves. A feasible way to overcome the problems of this changeable and irregular practice is to promote and establish a policy for the follow-up and accreditation of ECT services or units in order to guarantee its practice and security. The possible creation of reference units specialised in ECT<sup>2,4,16</sup> should be considered separately. An unavoidable objective is that patients can receive ECT in optimal conditions.

Even nowadays, the ECT is being underused in many psychiatric fields. The fact that the ECT has a guaranteed accessibility is especially important and constitutes an aspect to regulate, since it is not only an effective but also an elective treatment in some disorders, such as catatonia and different forms of depression and schizophrenia.<sup>17,18</sup>

There are specific associations of the ECT such as the European Forum For ECT or the Association for Convulsive Therapy with the aim, among many others, of promoting investigation, fighting against the stigma associated with ECT, and promoting good practices.

In addition, the scientific literature is focusing more on the issues related to the ECT practice, its psychological context, and how to improve the perception of patients regarding their own treatment to reduce the related stigma and to favour the development of ECT under dignifying conditions.<sup>19-21</sup> While investigating this matter, it has been studied whether patients undergoing ECT were satisfied with the treatment and showed more favourable attitudes towards the ECT compared to other controls. The results were that they effectively showed a positive response towards the ECT.<sup>22,23</sup>

Nevertheless, it is necessary to keep working in order to better assess the need for information and the factors implied in the decision-making of the people who are offered ECT.<sup>24,25</sup>

Another aspect to consider is the special populations, such as children, adolescents, pregnant women and the elderly population. The effectiveness and security of the ECT in pedo-psychiatry obtain results similar to the results of adults.<sup>26-30</sup> The ECT can be used during the three trimesters of pregnancy and postpartum with good therapeutic response, especially in the treatment of major depression and bipolar disorder.<sup>4,31,32</sup> The data are also clear about the security of the treatment among elderly people.<sup>33</sup> While some data suggest a reduction in the number of young

patients treated with ECT,<sup>34</sup> on the other hand, there seems to be an increase in the number of elderly people who receive the treatment. This phenomenon might be related to the progressive ageing of the general population and the greater vulnerability of this population segment to affective disorders. Furthermore, the reports suggest that the ECT is particularly effective in the treatment of geriatric depression.<sup>4,35</sup>

Among other special populations (not psychiatric in this case) such as patients with advanced Parkinson disease, there is evidence of an improvement in some parameters of the disease when treated with ECT.<sup>36</sup> It is also effective with the neuroleptic malignant syndrome.<sup>37</sup>

As regards the investigation, there is a considerable increase in the studies performed in the field of genetics, neuroimaging, neurobiology, biomarkers, and in neuropsychological and psychosocial investigation in order to assess the effects in the cognition and the emotional impact. In all neuroscience areas, the data are conclusive that the ECT is a safe and generally well-tolerated treatment upon which new evidence has been produced regarding the action mechanisms involved.<sup>38</sup>

In the last years, there has been an increase in the use of maintenance electroconvulsive therapy.<sup>39,40</sup> The antidepressant effect of the ECT does not represent an addition in the cognitive deficit in these patients in the long term,<sup>41,42</sup> although it is observed that they can suffer from short-term memory dysfunction and frontal functionalism.<sup>43</sup> The declarative memory is altered after ECT, whereas the immediate memory is widely conserved.<sup>44</sup> It is a slight cognitive dysfunction of the right hemisphere that is detected through a reduced visuospatial skill in patients treated with ECT compared to the control group.<sup>45,46</sup>

Also in this area, as well as in other psychiatric therapy areas, pragmatic studies are being carried out, such as the ones made by the Consortium for Research in Electroconvulsive Therapy.<sup>47,48</sup> These studies have allowed for the consideration of continuation/maintenance ECT as an effective therapeutic alternative similar to lithium and nortriptyline, the contribution in the demonstration of the efficiency of the bilateral positioning of electrodes and the usefulness of ECT in not only unipolar, but also bipolar depression.<sup>49</sup>

Recently, scientific interest in the indication of ECT for schizophrenia has reappeared since the confirmation that it can be an effective and safe option, combined with drugs, for a concrete group of patients with schizophrenia, such as patients with refractory schizophrenia, catatonia, who suffer suicidal behaviour or aggressiveness as well as those who require fast global improvement and reduction of severe symptomatology.<sup>50-52</sup>

From the point of view of health economics, through systematic revisions and studies of the economic model, it has been confirmed that the ECT, beyond its clinical benefits, is a cost-benefit alternative for depression diseases, schizophrenia, catatonia and mania.<sup>53,54</sup>

In these almost 80 years of history of ECT, there are plenty of therapeutic alternatives that have been compared to this technique without detriment of the validity of the ECT. Nowadays, ECT is compared with other physical therapies, such as transcranial magnetic stimulation, and with new pharmaceutical treatments, such

as the repeated administration of intravenous infusion of ketamine hydrochloride. The accurate transcranial magnetic stimulation requires further investigation in order to be incorporated into the clinical practice.<sup>55</sup> The intravenous treatment with ketamine, which rapidly improves the depressive symptoms, needs to demonstrate a long-lasting response and security before its implementation in the clinical practice.<sup>56</sup> As Kellner<sup>57</sup> states, the interest and enthusiasm must not cloud the clinical judgement. First of all, approaches based on experimental evidence should be offered. The ECT based on evidence is an effective and efficient technique, more effective and efficient than many other therapeutic strategies that are the object of major attention and investigation budget. Beyond its effectiveness and efficiency, there are a lot of pending challenges that the ECT has to deal with in our country and, probably, in most parts of the world, such as: to find a possible under-usage of the technique, to provide patients with universal access to this treatment regardless of their geographic location, and to ensure the compliance with minimum standards when indicating and/or applying the ECT, with the purpose of reducing the variability in the ECT practice. In order to face these challenges, health care professionals have to be well prepared, ECT units should comply with certain requirements, and the organisations competent on health care planning matters should be aware of the importance of this technique so as to achieve symptomatic remission and functional recovery of many patients. The scientific societies are essential to reach the expected challenges and to contribute to definitely bringing down the social stigma that comes along with this technique, dignifying a treatment (ECT) totally supported by scientific evidence.

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