


Ethical Implications of Electroconvulsive Therapy: A Review


David González-Pando, PhD 

Ana González-Menéndez, PhD 

University of Oviedo, Oviedo, Spain

Víctor Aparicio-Basauri, MD, PhD 

*International Scientific Committee of the Lisbon Institute of Global Mental Health,
Lisbon, Portugal*

César Luís Sanz de la Garza, MD 

Health Service of the Principality of Asturias, Asturias, Spain

José Esteban Torracchi-Carrasco, PhD 

University of Cuenca, Cuenca, Ecuador

Marino Pérez-Álvarez, PhD 

University of Oviedo, Oviedo, Spain

This article examines in depth whether electroconvulsive therapy (ECT) satisfies bioethics' four healthcare provision principles: nonmaleficence, beneficence, justice, and autonomy. Treating patients ethically implies protecting them from damages, working to ensure their well-being, and respecting their decisions once they have been correctly informed. Although most of the medical literature states that ECT is an effective and safe technique, there is no conclusive evidence of long-term effectiveness. The frequent and sometimes persistent side effects such as amnesia that imply a profound disturb of lived experience, or the difficulties regarding the informed consent process, allow us to conclude that the bioethical debate about ECT is not currently closed, and the information provided to patients needs to be revised.

Keywords: electroconvulsive therapy; bioethics; mental health; patient acceptance of healthcare

Discussions between opposing positions have always abounded in the field of mental health and have led to radically different discourses on the approach to psychopathological phenomena (Pérez-Álvarez, 2014). In this context, no treatment has been the object of more significant controversy than electroconvulsive therapy (ECT). This technique could collide with an ethical and humane vision of care (González-Pando

et al., 2020a). Understanding this technique's ethical issues is part of the intelligent and humanistic psychiatry (Richa & De Carvalho, 2016).

As a philosophical study of human behavior, ethics, and more specifically, bioethics, it offers a critical perspective that is crucial to deliberate on the acceptability of treatments such as ECT, but the ontological and epistemological perspectives are also relevant to the analysis of this work.

The controversy about ECT is reflected in its highly variable rates of application. For example, in Spain, they oscillate between 0.00 and 3.90 per 10.000 inhabitants depending on the province (Sanz-Fuentenebro et al., 2017). Internationally, the situation is similar, with rates ranging from 0.11 to 5.1 per 10,000 (Leiknes et al., 2012). In United Kingdom a recent study found a 47-fold difference between highest and lowest regional usage (Read et al., 2021). Such variability reveals a lack of consensus on ECT. Against this background, while ECT is spreading in some countries, in others, such as the United Kingdom, its use continues to decline (Read et al., 2017; Read et al., 2021). While some psychiatrists administer ECT, convinced of applying a legitimate, effective, and safe procedure, others do not recommend it even as a last option of treatment due to its lack of effectiveness and the conviction that it damages the brain (Breggin, 2010).

ECT deserves a serious interdisciplinary ethical debate. This article aims to provide arguments for this debate by reviewing the bioethical issues involved in this controversial treatment technique.

ETHICAL REFLECTIONS ON ECT

One of the objectives of ethics is to encourage prudent decision-making. However, ethics has to do with values (Stefanazzi, 2013). In mental healthcare, the relationship between culture, values, and ethics is complicated and must be adequately examined since physicians' deliberations on ethical issues are influenced by values that are products of their personal development and clinical culture and may reflect values not shared by their patients (Hoop et al., 2008). In this context, while for some psychiatrists ECT is an ethically correct procedure (Fink, 2005), for others it violates the principles of medical ethics (Breggin, 1998).

Studying whether ECT satisfies bioethical principles implies not considering the debate over as its defenders claim (Bernardo & Urretavizcaya, 2015; Fink, 2005; Ottoson & Fink, 2004; Romero-Tapia & Gamboa-Bernal, 2018). These authors present ECT as an effective, safe, and ethically correct procedure. All of them are committed to greater availability of ECT.

In the clinic and research, reviewing ethics is a prerequisite because if ethical aspects are neglected, everything else is invalidated. For example, the American Psychiatric Association (APA) report (1978, 1990) recognizes ECT's controversial nature, but the ethical-legal elements do not appear until the seventh chapter. In the eighth chapter of its subsequent update (APA, 1978/1990), the problem is reduced to obtaining informed consent (IC), and the term "controversy" is eliminated. In the Spanish Consensus on ECT (Sociedad Española de Psiquiatría Biológica [SEPB], 2018), the ethical-legal aspects appear in the same eighth point. This document cites the principles of biomedical ethics of Beauchamp and Childress (2013) to affirm that ECT complies with these basic

principles but does so without reasoned ethical considerations, limiting itself to proving such compliance axiomatically. It maintains that ECT is a useful treatment (principle of beneficence), with a favorable risk-benefit profile (the focus of nonmaleficence) and quite precise indications. The principle of autonomy is overcome by indicating the need to inform the patient and obtain his/her signature on the IC document. The principle of justice, according to Ottoson and Fink (2004), means that the ECT should be applied to anyone who requires it. Uncritically assuming these considerations allows to clear up any uncertainty. However, this clear horizon in decision-making is more apparent than real.

Respect for the individual has been reduced to the principle of autonomy. Still, initially it was a broader concept including two distinct moral prerequisites: that individuals should be treated as autonomous agents and that any person whose autonomy is diminished has the right to be protected. These principles would incorporate the maximum "*primum non nocere*" or code of nonmaleficence, according to which quaternary prevention should take precedence over any doubtful curative option, forming part of patient safety (Ortiz & Ibáñez, 2011). Therefore, for a correct ethical judgment, it is necessary to study the adverse effects of ECT. It is not enough to demonstrate that the procedure is effective; it must also be shown to be safe (Read & Bentall, 2010).

Providing safety is a fundamental requirement in mental health because the patients are often people who have been harmed and who often end up fearing professionals and services more than their original suffering (Valverde & Inchauspe, 2017). Safety is based on the belief that one will be treated without harm, with gentleness and respect, and is related to trust. Trust arises in a relationship where dialogue is communicative, not merely informative, and allows the patient to develop a narrative that makes sense of what is happening and makes shared decisions (Valverde & Inchauspe, 2017). It is worth thinking that SEPB (2018) points out the use of diptychs as a criterion of excellence regarding the information process and IC when it is known that the most effective communication is that which takes place in an interpersonal relationship. The question is whether certain practices of biological psychiatry meet the conditions which make it possible to trust.

The actors involved in healthcare play different roles concerning ethics. The principle of justice guides institutions, patients assert the doctrine of autonomy, and professionals are guided by nonmaleficence and beneficence principles. However, in case of conflict, the principles of nonmaleficence and justice prevail.

Principle of Nonmaleficence

Biological psychiatry has firmly denied that ECT produces brain damage. Numerous classic works in animal models that showed damage to the organism have been systematically ignored by proponents of the technique, such as Fink himself, who described traumatic effects in early works that he would later deny in an attitude described as unethical and unscientific (Breggin, 1998). ECT's safety cannot be affirmed until favorable evidence in animal models is available, which does not exist.

For Frank (2002), it is paradoxical that mental illness is established as a cerebral entity without evidence, but the damage caused by ECT is denied when there is evidence of it. Such evidence reports brain damage or persistent alterations in memory and other cognitive functions (Breggin, 1998, 2007, 2010; Cavazos et al., 1994; Dolan, 1990; Read & Bentall, 2010; Read et al., 2019; Robertson & Pryor, 2006; Sackeim et al., 2007). Many patients treated with ECT suffer irreversible dysfunctions that course through apathy,

impaired social skills, attention problems, and difficulty remembering new information (Breggin, 1998). As is also the case with severe head injuries, the most common issues are memory problems.

Typical post-ECT symptoms such as headache, memory dysfunction, disorientation, confusion, poor judgment, or unstable mood are indistinguishable from those produced by brain damage (Breggin, 2010). According to Fisher (1985), ECT causes damage similar to those produced by casual electrical accidents in the head: problems with attention, concentration, verbal memory, and relearning. Cavazos et al. (1994) showed that electrically induced seizures could produce a neuronal loss in the hippocampus, a confirmed finding in mice (Zarubenko et al., 2005). Robertson and Pryor (2006) state that adverse cognitive effects are due to, among other causes, the direct impact of electricity on the hippocampus. Other authors (Fosse & Read, 2013) propose that ECT affects the brain similarly to severe stress or brain trauma that activates the hypothalamic-pituitary-adrenal axis and the dopaminergic system and can compromise frontotemporal functions.

According to Breggin (1998), the ECT, far from correcting abnormalities, generates them. A follow-up study confirmed various persistent deficits in memory and general cognitive function (Sackeim et al., 2007). A review study found persistent memory loss in 29%–55% of patients (Rose et al., 2003). According to Sterling (2000), it is easy to find these harms, but psychiatrists are not aware of them simply because they do not examine memory loss.

The industry has tried to ignore the adverse effects of ECT for decades. Still, recent court rulings have forced manufacturers to incorporate into their products the warning that some patients may experience permanent brain damage (Breggin, 2018). Although ECT can cause irreversible anterograde and retrograde amnesia, especially with a bilateral application, manufacturers declare themselves exempt from any liability for medical complications such as these in their regulatory update. Thus, recent clinical trials focus on introducing modifications to minimize side effects. The use of short (1 ms), ultra-short (0.3 ms), or unilateral administration (Read et al., 2019) is being investigated. However, ultra-short pulses mean more stimulation time and are less effective, although they could be used to minimize impairment in situations of cognitive risk (Sanz-Fuentenebro, 2018).

The evaluation of potential damage associated with ECT varies significantly between psychiatrists. Some prescribe ECT considering that its effectiveness compensates for the risks. In contrast, others do not use it, stating that it is irrelevant to talk about effectiveness when the technique produces frequent and potentially severe damage (Breggin, 2010). If ECT is used with too much enthusiasm, the risks may outweigh the benefits (Cyrzyk, 2013), something to be considered in the face of a technique whose history is marked by abuse (Seniuk, 2018).

As for mortality, a rate of 2.1/100,000 treatments has been offered (SEPB, 2018). This low rate could be related to restrictive criteria for the inclusion of cases. Some authors have found rates at least ten times higher (Read & Arnold, 2017; Read & Bentall, 2010). Although for the APA (2001) the mortality from ECT is 1 per 10,000 patients, this rate underestimates the reality because it refers to a single application (Seniuk, 2018). Mortality could considerably increase when using ECT in older people (Kroessler & Fogel, 1993). In this sense, it is remarkable that with successive sessions, the convulsive threshold increases an average of 60% (Sanz-Fuentenebro, 2018), requiring a progressive increase of discharge doses.

Regarding the risk of suicide, some authors claim that ECT could increase it in the short term (Munk-Olsen et al., 2007). One possible explanation is that patients could find that their prior problems have now been complicated by ECT-induced memory dysfunction that will not go away (Breggin, 1998).

A little researched aspect is the possibility that ECT increases social stigma and self-stigma in coherence with studies that show how clinical practices based on biogenetic hypotheses in the form of “broken mechanisms” increase prejudice, stigmatization, or the desire for social distancing (Angermeyer et al., 2011; Kvaale et al., 2013; Longden & Read, 2017; Magliano et al., 2013; Read & Harper, 2020; Yao et al., 2020). Also, negative experiences associated with treatment include feelings of fear, shame, humiliation, helplessness, or the feeling of having been abused (Johnstone, 1999).

In summary, post-ECT brain damages have been confirmed in the form of a joint, persistent, and significant memory dysfunction (Stefanazzi, 2013). The risk-benefit analysis of ECT is so poor that its use cannot be scientifically justified (Read & Bentall, 2010; Read et al., 2019) given the evidence of harm, mainly amnesia, and a slight but notable increase in the risk of death, mostly when the apparent short-term improvement can be attributed to post-ECT euphoria, or be an artefact of cognitive and memory impairment.

Iatrogenic is a poorly studied mental health problem that again puts the focus on quaternary prevention. What is advocated is a model of shared decisions that allow consideration of alternatives that fully guarantee patients’ safety and rights (Ortiz & Ibáñez, 2011). Finally, the possibility that the treatment would be futile would mean a breach of the principle of nonmaleficence. This possibility requires a rigorous examination of its effectiveness. In any case, administering a treatment for which there is evidence of harm involves an ethical conflict that must be addressed by safeguarding all parties’ dignity (Stefanazzi, 2013).

Principle of Beneficence

Psychiatrists who prescribe ECT, primarily in depression, schizophrenia, and bipolar disorder say it is a useful treatment. However, evidence of effectiveness comes from studies that do not meet fundamental methodological standards to ensure their validity (Ross, 2006). According to the UK ECT Review Group (2003), only 12% of studies met minimum methodological rigor. Few included placebo, a fundamental element for controlling the expectations of improvement attributable to any intervention. Some studies are so coarse that they do not use validated measures or independent observers (Read & Bentall, 2010). For Burstow (2016), research on ECT is characterized by a profound lack of ethics. According to Read et al. (2019), the quality of most studies that compared real with simulated ECT is so low that the meta-analyses performed were wrong to make any conclusion about efficacy because they did not pay enough attention to the multiple limitations of the works included. ECT has not demonstrated long-term utility in the pathologies for which it is indicated. In depression, most controlled studies reflect that it is not superior to placebo (Breggin, 1998). None have shown utility beyond treatment, with no evidence of efficacy in severely depressed, suicidal people, those who have failed previous treatments, involuntary patients, or in children and adolescents (Read et al., 2019).

In schizophrenia, classical and more recent studies using sham ECT found no improvement even in the short term. Despite decades of treatment, the role of ECT in addressing schizophrenia remains fraught with questions, to the point that the National Institute

for Clinical Excellence (NICE, 2003) indicates that it should not be used as a general treatment in this diagnosis. In bipolar disorder, the use of ECT is characterized by a lack of scientific evidence in contrast to extensive clinical experience (Versiani et al., 2011).

A benefit usually attributed to treatment is the possibility of reducing suicide, having been presented as a first choice resource in patients at high risk (SEPBB, 2018). However, several studies claim that ECT does not reduce it (Avery & Winokur, 1976; Breggin, 1998; Peltzman et al., 2020; Read & Bentall, 2010; Read et al., 2019).

In summary, no rigorous study has demonstrated effectiveness one month after treatment (Ross, 2006), a period that coincides with recovery from the organic brain syndrome produced by the technique (Breggin, 1998). If ECT's effectiveness is not consistent with the available evidence (Read & Arnold, 2017), the principle of beneficence is questioned. Clinicians may be using a treatment whose effectiveness has historically been overestimated (González-Pando et al., 2020b).

Principle of Justice

Justice has to do with equity, which consists of having the resource available for those who need it and respecting the rights of the patient, adjusting to their needs, and distributing health resources appropriately. According to Fink (2005), the principle of justice is not fulfilled due to the low availability of ECT. However, defending ECT as an universally available treatment for all patients (Otto & Fink, 2004) could be seen as a strategy for expanding the technique rather than as a guarantee of the principle of justice. Furthermore, this is not consistent with the consideration of ECT as a last resort of treatment (NICE, 2003).

The principle of justice is misunderstood in terms of universal availability, which would only lead to greater use. The focus of justice must be seen as related to the concept of cost-opportunity. As resources are limited, using them for one purpose means taking them away from another. There is a worrying gap between the demonstration of effectiveness of psychosocial treatments and their availability in mental health. The generosity with which biological treatments are funded does not extend to psychological therapies, often not available despite being listed in international clinical practice guidelines and lacking in side effects. For example, only 1 in 10 patients with schizophrenia have access to psychological therapies (Paino et al., 2019). These therapies teach skills that promote well-being and give the patient an active role that allows them to situate the cause of the improvement in themselves and feel empowered for the future (Read & Arnold, 2017). Proposing ECT as a universal first-line treatment is especially inadmissible when the one who decides its use is a psychiatrist under consensus that include the simple preference of the patient as an indication for treatment (SEPBB, 2018).

In short, ECT should not be considered as one more element in the portfolio of services, but rather a procedure restricted to be exclusively contemplated when other evidence-based treatment options that should have been available previously have failed (González-Pando et al., 2020b).

Principle of Autonomy

Respect for human vulnerability, personal integrity, and the presence of stigma must be recognized before considering the principle of autonomy (Stefanazzi, 2013). However, the

focus of autonomy has been reduced to the IC (SEPBB, 2018). The IC's essential function is to provide considerations that allow the right to accept or reject a treatment to be exercised, alleviating the imbalance of power between doctor and patient. However, IC is a necessary but not sufficient condition to guarantee the principle of autonomy. The user must receive truthful and understandable information to deliberate and make a free judgment, but his/her decision will only be autonomous if the informant's influence is limited. Therefore, authoritarian or paternalistic attitudes should be reversed in favor of a person-centered approach that respects the individual's autonomy and dignity (Richa & De Carvalho, 2016).

Information is fundamental to preserving autonomy. The problem is under what conditions the information is provided, what data is handled, and who gives it since the informant is involved in the procedure and uses selected information that does not allow the patient to know the technique's controversy. Regarding the side effects of the IC, different professionals may disagree extraordinarily (Seniuk, 2018). Enthusiasts like Fink minimize negative aspects by claiming that ECT is effective and safe (Cyrzyk, 2013). The Spanish Consensus (SEPBB, 2018) cites ten works by Fink, but none by Breggin, who states that the technique is traumatic and ineffective. Patients are not being informed of views contrary to treatment (Stefanazzi, 2013), and failure to properly notify them of potential dangers can invalidate IC. If there is damage, a conventional IC, even correctly signed, may not be sufficient to protect the physician.

IC is a complex concept. Beauchamp and Childress (2013) had pointed out different components: competence, disclosure, understanding, voluntariness, and consent. The application of IC reveals interpersonal dynamics that affect autonomy, such as an asymmetry of doctor–patient roles that may prevent the expression of conflicting opinions (Stefanazzi, 2013). Patients could agree with almost anything the physician proposed (Freeman & Kendell, 1980). Rose et al. (2003) demonstrated that patients are more critical of ECT than when questioned by the physician when interviewed by other patients. Half of the patients studied had not received sufficient information, and a third considered that they had not signed the IC freely. Some authors advocate including in the IC that there is no evidence of benefit one month after treatment, and that the superiority against placebo is only modest in that period. For Breggin (1998, 2010, 2018), it is also necessary to report the potential brain damage.

The context and information provided, the clinician's attitudes, and his/her nonverbal communication induce expectations that strongly influence the patient. The physician projects in the patient the expected response, and the therapeutic results are described but at the same time prescribed, according to a sort of Charcot effect (Pérez-Álvarez & García-Montes, 2007). This is especially relevant in depression, where the response to placebo is substantial and must be controlled (Fosse & Read, 2013; Read & Arnold, 2017). Overreliance on the technique may underestimate suffering from common side effects such as memory impairment (Seniuk, 2018). In this regard, while professionals are primarily concerned with symptom reduction, what matters most to patients are overall benefits, cognitive function, and memory (Cyrzyk, 2013). In summary, if the doctor–patient relationship is asymmetric, it is even more so in mental health because there are particular circumstances of vulnerability and fragility. According to Stefanazzi (2013), the question is whether there is a genuine possibility of disagreement between a patient with a severe mental disorder and their clinician.

The principle of autonomy is critical. For patients to be autonomous, they must be competent, well informed, and free to make decisions. This situation is rare in severe mental disorders. In these cases, the IC for ECT by definition cannot occur because circumstances prevent it (Frank, 2002). In depression, the possibilities of action and the intentional structures are so weakened that they compromise the decision process. In severe cases, the patient lacks autonomy for the IC from a conventional bioethical perspective (Seniuk, 2018). In psychosis, the panorama is even more problematic due to a profound alteration that prevents an adequate understanding of reality and the treatment proposal. Even the patient could give his consent due, precisely, to delirious convictions. This situation, often accepted by the therapist and allows treatment, reflects delusional support that is also invalid from an ethical point of view (Bersani et al., 2020). However, for Romero-Tapia and Gamboa-Bernal (2018), the ECT does not violate the patient's autonomy because the mental illness alters it. This approach could promote a dehumanized view of the person with psychopathological problems, favoring stigma and a more crude or paternalistic treatment, since people with difficulties characterized in terms of mental illness are treated more harshly (Pérez-Álvarez, 2011).

Another essential aspect is that IC does not adequately reflect how memory loss disturbs the lived experience (Seniuk, 2018). While memory is the very essence of the person and determines his/her articulation with the world, physicians use imprecise terminology to explain ECT's adverse effects on memory (Robertson & Pryor, 2006). Autobiographical memory impairment can alter the sense of self and be disturbing to the patient. Explaining post-ECT amnesia as the simple inability to remember is misleading because it affects both the sense of identity, daily experience, and intentional contact with the world (Seniuk, 2018). The amnesic effects should not be reported as a discrete functional loss because the patient cannot understand that these damages will radically interfere with their lived experience. Some works (Johnstone, 1999) show the devastating impact that post-ECT amnesic alterations produce on an emotional and social level, including loss of important memories or inability to recognize loved ones.

From a bioethical perspective, and according to a phenomenological approach, the physician should explain that memory loss can profoundly change how one behaves and orients oneself to the world and prepare the patient to assume this risk (Seniuk, 2018). European phenomenological psychiatry has always been interested in disturbing lived experience, and the clinician should be willing to delve into it through narratives (Vamos, 2008). However, biological psychiatry is more interested in neuroscience, and its understanding of memory does not fit well with a phenomenological conception, which is essential to understand the implications of its loss.

Memory is crucial for a phenomenological characterization of the self. Without memory, one is lost: "I felt as though I had become a completely different person" (Johnstone, 1999, p. 78). More than memory, what is damaged is the ability to lead a full and meaningful life (Frank, 2002). Therefore, patients need more support and better information to deliberate and decide. Some experience being forced to accept treatment, and when the results are not as expected, the process is remembered as coercive (Smith et al., 2009).

These considerations go beyond a decision based on current IC information on risks and benefits, which is nothing more than a mirage aimed at covering physicians' responsibilities (Breggin, 1998). The conventional IC points out that the benefits are much greater than the possible disadvantages. The side effects are usually scarce, the main one being a transitory decrease in memory, which is only occasionally permanent. Thus, patients do

not adequately know the risks of ECT when they sign the IC. Even the doctor's training could be an obstacle to an adequate explanation (Seniuk, 2018).

To guarantee the principle of autonomy, individual responsibility, and capacity of consent, the different arguments regarding ECT should be offered together with other treatment alternatives (Stefanazzi, 2013). The option of not treating should also be explained, a choice of enormous value at times (Ortiz & Ibáñez, 2011). All this implies sufficient time for a dialogue with the patients and those whose support they may need; a genuine conversation that favors autonomy, hospitality, and dignity.

CONCLUSIONS

The acceptability of ECT is a complex issue that depends closely on the assessment of compliance/ noncompliance with bioethical principles. The debate involves all mental health disciplines according to principles common to all professional deontology, namely, respect for the individual, protection of human rights, sense of responsibility, honesty and sincerity toward clients, prudence, and sound scientific basis of the interventions applied (American Psychological Association, 2017). Criticizing ECT could be an action based on ethical and scientific reasons (González-Pando et al., 2020b). This action can perhaps only be taken from positions free of conflicts of professional, economic, industrial, or other interests. Only in this way is it possible to criticize *ad hoc* ethical arguments whose robustness is more apparent than real; ideas elaborated by authors who bet enthusiastically on the expansion of ECT. This critical vision allows us to question interventions like ECT that strengthen a biomedical model of mental healthcare, specially when they can harm vulnerable people or increase the stigma they suffer.

If treating people ethically means protecting them from harm and striving to ensure their well-being by respecting their decisions, ECT is especially controversial because many of those who receive it are vulnerable. If its effectiveness is not consistent with the available evidence (Read & Arnold, 2017), having it for sure is a scientific belief, not a proven fact. This leads us to question the principle of beneficence. The existence of common side effects such as memory impairment allows the principle of nonmaleficence to be asked. Thus, the technique would only be ethically justifiable in restricted or exceptional cases where a rapid response is required to allow these risks to be assumed and provided that other less harmful therapeutic options, such as empirically supported psychological treatments, have failed. Unfortunately, these alternatives are usually not available due to their poor implementation in health services in many countries. This panorama is unacceptable when we have effective psychotherapies for most mental disorders, both in reducing symptoms and improving well-being and quality of life (Cuijpers, 2019).

The improvement of IC is a critical aspect of the debate. According to Read et al. (2021), IC falls below both UK legal requirements and NICE expectations. Consent must be given based on adequate information, so it is necessary to review it. The explanation that ECT is "believed to correct biochemical abnormalities" is misleading and should be avoided (Blease, 2013). The correct thing would be to state that the mechanism of action is unknown. Regarding the effectiveness, it should be reported that it has not been demonstrated in the long term. In some studies, the ECT is not superior to placebo even during treatment. As for side effects, their explanation in the IC has been unacceptably

minimized (Burstow, 2016). The risk of memory impairment needs to be better explained. Although generally temporary, this could be permanent, causing a profound change in the lived experience and a transformation of personal identity that would affect the way of relating to the environment and giving continuity to life projects. Insofar as what is altered is the sense of self, it is obligatory to inform that memory damage can imply a more global disturbance than simple deterioration in a psychological process.

Finally, it is necessary to offer less harmful treatment alternatives that have scientific backing. Information that addresses more extensively and risks and benefits in the long term would generate a more autonomous, prudent decision and more realistic expectations about the results. The clinician must ensure that the IC process is free, voluntary, dialogic, and reflexive, which implies time dilation. Even if it is materialized in a signed document, it is invalid and immoral if obtained hastily and without sufficient information. Patients have the right to know, and professionals should report the existing controversy regarding the long-term effectiveness and side effects of ECT in the context of a therapeutic relationship based on trust. Not surprisingly, when the relationship does not start from the recognition and full acceptance of the other, bioethical principles lose much of their meaning (Valverde & Inchauspe, 2017).

Users of mental health services should be treated as what they are, people who need listening, attention, and care. Informing patients and families about ECT's controversial nature is understandably an ethical requirement and a moral obligation. The priority objective must be to improve the care, well-being, and quality of life of patients and reduce the severe problem of stigma.

In summary, in the debate on the acceptability of ECT, prudence leads to two positions. The first is to suspend its use until well-designed, randomized, controlled studies allow us to conclude that there is any significant benefit against which the proven risks can be weighed (Read et al., 2019). The second is to consider it a last resort in the face of other therapeutic options' failure, including empirically supported psychological treatments whose availability and accessibility health institutions should guarantee. Of course, we believe that psychiatrists who use ECT have the best intention toward their patients. In the short term, ECT can be effective and produce great changes in certain cases (Vallejo, 2011). Nevertheless, the improvement of the IC process is a pending subject.

REFERENCES

- American Psychiatric Association. (1978/1990). *The practice of electroconvulsive therapy: A task force report*. Author.
- American Psychiatric Association. (2001). *The practice of electroconvulsive therapy: Recommendations for treatment, training, and privileging* (2nd ed.).
- American Psychological Association. (2017). *Ethical principles of psychologists and code of conduct*. Author.
- Angermeyer, M. C., Holzinger, A., Carta, M. G., & Schomerus, G. (2011). Biogenetic explanations and public acceptance of mental illness: Systematic review of population studies. *The British Journal of Psychiatry*, 199(5), 367–372. <https://doi.org/10.1192/bjp.bp.110.085563>
- Avery, D., & Winokur, G. (1976). Mortality in depressed patients treated with electroconvulsive therapy and antidepressants. *Archives of General Psychiatry*, 33(9), 1029–1037. <https://doi.org/10.1001/archpsyc.1976.01770090019001>

- Beauchamp, T. L., & Childress, J. F. (2013). *Principles of biomedical ethics* (7th ed.). Oxford University Press.
- Bernardo, M., & Urretavizcaya, M. (2015). Dignificando una terapia electroconvulsiva basada en la evidencia [Dignifying electroconvulsive therapy based on evidence]. *Revista de Psiquiatría y Salud Mental*, 8(2), 51–54. <https://doi.org/10.1016/j.rpsm.2015.01.002>
- Bersani, G., Pacitti, F., & Iannitelli, A. (2020). Delusional consent in somatic treatment: The emblematic case of electroconvulsive therapy. *Journal of Medical Ethics*, 46(6), 392–396. <https://doi.org/10.1136/medethics-2019-105540>
- Blease, C. R. (2013). Electroconvulsive therapy, the placebo effect and informed consent. *Journal of Medical Ethics*, 39(3), 166–170. <https://doi.org/10.1136/medethics-2012-100955>
- Breggin, P. R. (1998). Electroshock: Scientific, ethical, and political issues. *International Journal of Risky Safety in Medicine*, 11(1), 5–40.
- Breggin, P. R. (2007). ECT damages the brain: Disturbing news for patients and shock doctors alike. *Ethical Human Psychology and Psychiatry*, 9(2), 83–89. <https://doi.org/10.1891/152315007782021196>
- Breggin, P. R. (2010). The FDA should test the safety of ECT machines. *International Journal of Risky Safety in Medicine*, 22(2), 89–92. <https://doi.org/10.3233/jrs-2010-0491>
- Breggin, P. R. (2018, October 23). *Huge breakthrough in lawsuits against ECT shock device manufacturers*. Mad in America. <https://www.madinamerica.com/2018/10/huge-breakthrough-ect-lawsuit/>
- Burstow, B. (2016). Legitimizing damage and control: The ethicality of electroshock research. *Intersectionalities: A Global Journal of Social Work Analysis, Research, Polity, and Practice*, 5(1), 94–109.
- Cavazos, J. E., Das, I., & Sutula, T. P. (1994). Neuronal loss induced in limbic pathways by kindling: Evidence for induction of hippocampal sclerosis by repeated brief seizures. *Journal of Neuroscience*, 14, 3106–3121.
- Cuijpers, P. (2019). Targets and outcomes of psychotherapies for mental disorders: An overview. *World Psychiatry*, 18(3), 276–285. <https://doi.org/10.1002/wps.20661>
- Cyrzyk, T. (2013). Electroconvulsive therapy: Why it is still controversial. *Mental Health Practice*, 16(7), 22–27. <https://doi.org/10.7748/mhp2013.04.16.7.22.e769>
- Dolan, R. (1990). Neurologic side effects of psychiatric treatments. *Seminars in Neurology*, 10(3), 295–302. <https://doi.org/10.1055/s-2008-1041281>
- Fink, M. (2005). Is the practice of ECT ethical? *The World Journal of Biological Psychiatry*, 6(2), 38–43. <https://doi.org/10.1080/15622970510030054>
- Fisher, J. M. (1985). Cognitive and behavioral consequences of closed head injury. *Seminars in Neurology*, 5(3), 197–204. <https://doi.org/10.1055/s-2008-1041516>
- Fosse, R., & Read, J. (2013). Electroconvulsive treatment: Hypotheses about mechanisms of action. *Frontiers in Psychiatry*, 4, 94–103. <https://doi.org/10.3389/fpsy.2013.00094>
- Frank, L. R. (2002). Essay: Electroshock: A crime against the spirit. *Ethical Human Sciences and Services*, 4(1), 63–71. <http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.572.504&rep=rep1&type=pdf>
- Freeman, C. P., & Kendell, R. E. (1980). Patients' experience of and attitudes. *British Journal of Psychiatry*, 137, 8–16. <https://doi.org/10.1192/bjp.137.1.8>
- González-Pando, D., Sanz de la Garza, C. L., Aparicio-Basauri, V., Arboleya, T., González-Menéndez, M. A., Méndez-Salguero, A., & Pérez-Álvarez, Y. M. (2020a). La psicología ante la terapia electroconvulsiva (I): Aspectos históricos y conceptuales [Psychology and electroconvulsive therapy (I): Historical and conceptual aspects]. *Papeles del Psicólogo*, 41(2), 125–131. <https://doi.org/10.23923/pap.psicol2020.2923>
- González-Pando, D., Sanz de la Garza, C. L., Aparicio-Basauri, V., Arboleya, T., González-Menéndez, M. A., Méndez-Salguero, A., & Pérez-Álvarez, Y. M. (2020b). La psicología ante la terapia electroconvulsiva (II): Consensos interesados a falta de evidencia [Psychology and electroconvulsive therapy (II): Interested consensus lacking in evidence]. *Papeles del Psicólogo*, 41(2), 132–138. <https://doi.org/10.23923/pap.psicol2020.2924>

- Hoop, J. G., DiPasquale, T., Hernandez, J. M., & Roberts, L. W. (2008). Ethics and culture in mental health care. *Ethics & Behavior*, 18(4), 353–372. <https://doi.org/10.1080/10508420701713048>
- Johnstone, L. (1999). Adverse psychological effects of ECT. *Journal of Mental Health*, 8(1), 69–85. <https://doi.org/10.1080/09638239917652>
- Kroessler, D., & Fogel, B. S. (1993). Electroconvulsive therapy for major depression in the oldest old: Effects of medical comorbidity on post-treatment survival. *American Journal of Geriatric Psychiatry*, 1(1), 30–37. <https://doi.org/10.1097/00019442-199300110-00005>
- Kvaale, E., Haslam, N., & Gottdiener, W. (2013). The ‘side effects’ of medicalization: A meta-analytic review of how biogenetic explanations affect stigma. *Clinical Psychology Review*, 33, 782–794. <https://doi.org/10.1016/j.cpr.2013.06.002>
- Leiknes, K., Jarosh-von, L., & Høie, B. (2012). Contemporary use and practice of electroconvulsive therapy worldwide. *Brain and Behaviour*, 2, 283–344. <https://doi.org/10.1002/brb3.37>
- Longden, E., & Read, J. (2017). People with problems, not patients with illnesses: Using psychosocial frameworks to reduce the stigma of psychosis. *Israel Journal of Psychiatry*, 54(1), 24–30.
- Magliano, L., Read, J., Saggiocchi, A., Patalano, M., & Oliviero, N. (2013). Effect of diagnostic labelling and causal explanations on medical students’ views about treatments for psychosis and the need to share information with service users. *Psychiatry Research*, 210, 402–407. <https://doi.org/10.1016/j.psychres.2013.07.022>
- Munk-Olsen, T., Laursen, T. M., Videbeck, P., Mortensen, P. B., & Rosenberg, R. (2007). All-cause mortality among recipients of electroconvulsive therapy: Register-based cohort study. *The British Journal of Psychiatry*, 190(5), 435–439. <https://doi.org/10.1192/bjp.bp.106.026740>
- National Institute for Clinical Excellence. (2003). *Guidance on the use of electroconvulsive therapy. Technology Appraisal Guidance 59*. <http://www.nice.org.uk/nicemedia/pdf/59ectfullguidance.pdf>
- Ortiz, A., & Ibáñez, V. (2011). Iatrogenia y prevención cuaternaria en salud mental [Iatrogenesis and quaternary prevention on mental health]. *Revista Española de Salud Pública*, 85(6), 513–523. <https://doi.org/10.1590/S1135-57272011000600002>
- Ottoson, J. O., & Fink, M. (2004). *Ethics in electroconvulsive therapy*. Brunner-Routledge.
- Paino, M., García, L., & Ordóñez, N. (2019). Tratamientos integrados multimodales en psicosis [Integrated multimodal treatments in psychosis]. In E. Fonseca (Ed.), *Tratamientos psicológicos para la psicosis* [Psychological treatments for psychosis] (pp. 321–344). Pirámide.
- Peltzman, T., Shiner, B., & Watts, B. V. (2020). Effects of electroconvulsive therapy on short-term suicide mortality in a risk-matched patient population. *Journal of ECT*, 36(3), 187–192. <https://doi.org/10.1097/YCT.0000000000000665>
- Pérez-Álvarez, M. (2011). *Esquizofrenia y cultura moderna* [Schizophrenia and modern culture]. Ediu-no.
- Pérez-Álvarez, M. (2014). *Las terapias de tercera generación como terapias contextuales* [Third generation therapies as contextual therapies]. Síntesis.
- Pérez-Álvarez, M., & García-Montes, J. M. (2007). The Charcot effect: The invention of mental illnesses. *Journal of Constructivist Psychology*, 20(4), 309–336. <https://doi.org/10.1080/10720530701503843>
- Read, J., & Arnold, C. (2017). Is electroconvulsive therapy for depression more effective than placebo? A systematic review of studies since 2009. *Ethical Human Psychology and Psychiatry*, 19(1), 5–23. <https://doi.org/10.1891/1559-4343.19.1.5>
- Read, J., & Bentall, R. (2010). The effectiveness of electroconvulsive therapy: A literature review. *Epidemiology and Psychiatric Sciences*, 19(4), 333–347. <https://doi.org/10.1017/S1121189X00000671>
- Read, J., Cunliffe, S., Jauhar, S., & McLoughlin, D. M. (2019). Should we stop using electroconvulsive therapy? *British Journal of Psychiatry*, 364, 1–3. <https://doi.org/10.1136/bmj.k5233>

- Read, J., & Harper, D. J. (2020). The power threat meaning framework: Addressing adversity, challenging prejudice and stigma and transforming services. *Journal of Constructivist Psychology*, 33(4), 1–14. <https://doi.org/10.1080/10720537.2020.1773356>
- Read, J., Harrop, C., Geekie, J., & Renton, J. (2017). An audit of ECT in England 2011–2015: Usage, demographics, and adherence to guidelines and legislation. *Psychology and Psychotherapy: Theory, Research and Practice*, 91(3), 263–277. <https://doi.org/10.1111/papt.12160>
- Read, J., Harrop, C., Geekie, J., Renton, J., & Cunliffe, S. (2021). A second independent audit of ECT in England: Usage, demographics, consent, and adherence to guidelines and legislation in 2019. *Psychology and Psychotherapy: Theory, Research and Practice*, 94. <https://doi.org/10.1111/papt.12335>
- Read, J., Kirsch, I., & McGrath, L. (2019). Electroconvulsive therapy for depression: A review of the quality of ECT vs sham ECT trials and meta-analyses. *Ethical Human Psychology and Psychiatry*, 21(2), 64–103. <https://doi.org/10.1891/EHPP-D-19-00014>
- Richa, S., & De Carvalho, W. (2016). Les principes éthiques de l'électroconvulsivo therapie [Ethical principles in electroconvulsive therapy]. *Encephale*, 42(6), 594–597. <https://doi.org/10.1016/j.encep.2015.04.005>
- Robertson, H., & Pryor, R. (2006). Memory and cognitive effects of ECT: Informing and assessing patients. *Advances in Psychiatric Treatment*, 12(3), 228–237. <https://doi.org/10.1192/apt.12.3.228>
- Romero-Tapia, A., & Gamboa-Bernal, G. A. (2018). ¿Es bioéticamente adecuada la aplicación de la Terapia Electroconvulsiva? [Is ethic the use of electroconvulsive therapy?]. *Cuadernos de Bioética*, 29(95), 13–24.
- Rose, D., Wykes, T., Leese, M., Bindman, J., & Fleischmann, P. (2003). Patients' perspectives on electroconvulsive therapy: Systematic review. *British Medical Journal*, 326, 1–5. <https://doi.org/10.1136/bmj.326.7403.1363>
- Ross, C. A. (2006). The sham ECT literature: Implications for consent to ECT. *Ethical Human Psychology and Psychiatry*, 8(1), 17–28. <https://doi.org/10.1891/ehpp.8.1.17>
- Sackeim, H. A., Prudic, J., Fuller, R., Keilp, J., Lavori, P. W., & Olfson, M. (2007). The cognitive effects of electroconvulsive therapy in community settings. *Neuropsychopharmacology*, 32(1), 244–254. <https://doi.org/10.1038/sj.npp.1301180>
- Sanz-Fuentenebro, F. J. (2018). Características del estímulo en terapia electroconvulsiva. Una revisión pragmática [Stimulus characteristics in electroconvulsive therapy. A pragmatic review]. *Revista de Psiquiatría y Salud Mental*, 11(1), 36–47. <https://doi.org/10.1016/j.rpsm.2016.06.003>
- Sanz-Fuentenebro, J., Vera, I., Verdura, E., Urretavizcaya, M., Martínez-Amorós, E., Soria, V., & Bernardo, M. (2017). Patrón de uso de la terapia electroconvulsiva en España: propuestas para una práctica óptima y un acceso equitativo [Pattern of electroconvulsive therapy use in Spain: Proposals for an optimal practice and equitable access]. *Revista de Psiquiatría y Salud Mental*, 10(2), 87–95. <https://doi.org/10.1016/j.rpsm.2015.12.003>
- Seniuk, P. (2018). I'm shocked: Informed consent in ECT and the phenomenological-self. *Life Sciences, Society and Policy*, 14(5), 1–19. <https://doi.org/10.1186/s40504-018-0068-z>
- Smith, M., Vogler, J., Zarrouf, F., Sheaves, C., & Jesse, J. (2009). Electroconvulsive therapy: The struggles in the decision-making process and the aftermath of treatment. *Issues in Mental Health Nursing*, 30(9), 554–559. <https://doi.org/10.1080/01612840902807947>
- Sociedad Española de Psiquiatría Biológica. (2018). *Consenso Español sobre terapia electroconvulsiva [Spanish Consensus on electroconvulsive therapy]*. Author.
- Stefanazzi, M. (2013). Is electroconvulsive therapy (ECT) ever ethically justified? If so, under what circumstances. *HEC Forum*, 25(1), 79–94. <https://doi.org/10.1007/s10730-012-9182-0>
- Sterling, P. (2000). ECT damage is easy to find if you look for it. *Nature*, 402, 242. <https://doi.org/10.1038/35002188>

- UK ECT Review Group. (2003). Efficacy and safety of electroconvulsive therapy in depressive disorders: A systematic review and meta-analysis. *Lancet*, 361, 799–808. [https://doi.org/10.1016/s0140-6736\(03\)12705-5](https://doi.org/10.1016/s0140-6736(03)12705-5)
- Vallejo, J. (2011). *Introducción a la psicopatología y la psiquiatría [Introduction to psychopathology and psychiatry]* (7^a ed.). Elsevier.
- Valverde, M. A., & Inchauste, J. A. (2017). El encuentro entre el usuario y los servicios de salud mental: consideraciones éticas y clínicas [The encounter between the user and mental health services: ethical and clinical considerations]. *Revista de la Asociación Española de Neuropsiquiatría*, 37(132), 529–552. <https://doi.org/10.4321/s0211-57352017000200012>
- Vamos, M. (2008). The cognitive side effects of modern ECT: Patient experience or objective measurement? *Journal of ECT*, 24, 18–24. <https://doi.org/10.1097/YCT.0b013e31815d9611>
- Versiani, M., Cheniaux, E., & Landeira-Fernandez. (2011). Efficacy and safety of electroconvulsive therapy in the treatment of bipolar disorder: A systematic review. *Journal of ECT*, 27(2), 153–164. <https://doi.org/10.1097/YCT.0b013e3181e6332e>
- Yao, X., Wang, C., Zhu, Z., & Hui, J. (2020). Effects of biogenetic beliefs for schizophrenia on potential caregivers in China: Exploring the role of affiliate stigma. *International Journal of Mental Health Nursing*, 29, 161–170. <https://doi.org/10.1111/inm.12655>
- Zarubenko, I. I., Yakovlev, A. A., Stepanichev, M. Y., & Gulyaeva, N. V. (2005). Electroconvulsive shock induces neuron death in the mouse hippocampus: Correlation of neurodegeneration with convulsive activity. *Neuroscience and Behavioral Physiology*, 35(7), 715–721. <https://doi.org/10.1007/s11055-005-0115-0>

Disclosure. The authors have no relevant financial interest or affiliations with any commercial interests related to the subjects discussed within this article.

Funding. The author(s) received no specific grant or financial support for the research, authorship, and/or publication of this article.

Correspondence regarding this article should be directed to David González-Pando, University of Oviedo, Faculty of Nursing, Cabueñes, Gijón 3394, Spain. E-mail: gonzalezpdavid@uniovi.es