WRTG 3030

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A Civic Essay on Electroconvulsive Therapy

**Introduction**

Electroconvulsive therapy (ECT) is a treatment for mental illnesses such as severe depression, mania, schizophrenia, catatonia, and obsessive-compulsive disorder. Generally, the ECT procedure involves current passing to the brain until seizures occur. The mechanism of action is not known, but it is thought to involve major neurotransmitter responses at the cell membrane. Insufficient amounts of electrical current produce no therapeutic value.

ECT was first conducted in 1938 by two Italian physicians, Ugo Cerletti and Lucio Bini. They developed the idea of using electricity as a substitute for Metrazol (a convulsive agent that produces an explosive seizure about a minute after the injection) in convulsive therapy. In 1937, ECT was experimented for the first time on a person. Once they started trials on patients, they found that this treatment produced significant results and it became a popular intervention for psychiatric conditions. In the 1950’s and 60’s, the growth of drug therapies for psychiatric conditions, and the negative portrayals of ECT in the mass media caused the use of ECT in the U.S. to decline.

Nowadays, ECT procedures have been improved. More enhanced methods have been developed like the use of anesthesia, the delivery of electrical current, patient preparation, and consent. Though the medical-psychiatric community agrees on the effectiveness and safety of ECT, some administrators like the U.S Food and Drug Administration (FDA) are concerned about its possible mistreatment and abuse. They are also concerned about failing to protect the rights of patients. Their concern may be amplified both because of the treatment side effects (confusion and memory loss) and the lack of knowledge of how ECT works.

Potentially, there are significant effects associated with ECT including physical trauma, fractures, pulmonary complications, prolonged seizures, and even death. [1] With the use of anesthesia during the ECT procedures, most of these adverse events have been reduced. Still, the risk of these adverse events is not completely eliminated, and other adverse events like headache, nausea, and vomiting are also of concern. As a psychiatrist in ECT, I would like to share my views on ECT and hope that the public will look at the advantages of ECT and accept it as part of treatment for mental illness.

**Literature Review:**

There is a lot of controversy involve with ECT from the past. The first issue is the “unmodified” ECT where anesthetic is not used during the treatment. During early treatment, unmodified ECT was performed and it caused the patients’ bodies to convulse so hard during a seizure that bones were frequently broken. The force of the seizure also causes broken teeth, bitten tongues and even spine fracture. In 1952, a remarkable synthetic chemical known as succinylcholine was found to block muscle contractions. It takes a minute to relax the muscle and it became useful to minimize any adverse effect of a convulsion.

This chemical does not only relax the back and jaw muscles, but also the muscles that control breathing. Therefore, the patient under succinylcholine is not aware that he is not breathing on his own because the anesthesia blocks his awareness as well. To help the patient in breathing, oxygen mask was provided and the patient’s breathing must always be monitored by an anesthesiologist or nurse-anesthetist. Also, the duration effect of anesthesia is very short, which lasts for three to ten minutes. So the anesthesia will wear off after ECT was performed. These modifications had changed into “modified” ECT.

In the book, *Doctors of Deception*, written by a shock survivor named Linda Andre writes, “the use of anesthesia in and of itself is associated with a small risk of death; with ECT, since the anesthesia is repeated in a dozen or more occasions, this risk is addictive.” [2] This is true, in a sense that if anesthesia is not carefully used in treatment, there will be some risk. Therefore, to maximize the safety and efficiency, ECT should be given by a team consists of a psychiatrist, a registered nurse, an anesthetic specialist, and a licensed practical nurse or nursing assistant. [3] With this group of specialist, the risks were reduced significantly.

The successes of ECT were known in the mid-1960 and had revived by 1970’s. Unfortunately, during the time for the reconsideration of ECT, many people still do not support it after they saw the forced treatment of the mentally ill as an abuse of power. In 1970, the groups of former mental patients protested the violations of human, legal, and civil rights within psychiatric organizations. The names of these groups of shock survivors are REJECT (Coalition for Responsible Education and Judgment on ECT), World Association of Electroshock in Survivors, and CAEST (Coalition for the Abolition of Electroshock in Texas). [2]

This situation got worse when negative portrayals of ECT were spread in the media. A graphic example of abuse was illustrated in Ken Kensley’s book, *One Flew Over the Cuckoo’s Nest* and it became a film in 1975. This movie made people to think that it is a painful treatment but in fact, the real treatment isn’t painful since anesthesia is given. Other movies that show the same negative scenes were Girl, Interrupted (1999) and White Heat (1949). Not only the description of ECT was terrifying, the people also fear of the continuing and substantial adverse cognitive side effects and memory loss experienced by many people who have undergone ECT.

**Rhetorical Analysis:**

Before this situation gets worse, the public should know the truth about the procedure and not with the wrong depiction of ECT. Everyone should know the importance of ECT as it can treat severe mental illness patients that don’t respond to antidepressant drug. First, people should not get confused with the fake ECT procedure shown in movies because they are not real and they are just for entertainment. For example, in the movie *Star Wars*, notice the laser beams used emits a certain length of light. In reality, we know that laser beams move at the speed of light, so why don’t they spear through the further ahead like giant glowing arrows.

Movies like this, affects people’s mind until they can’t differentiate between reality and fantasy. So back to the movie mentioned earlier, *One Flew Over the Cuckoo’s Nest,* the actor playing as a patient was forced against his will to endure painful and violent seizures. The actor exaggerates too much of pain that cause the audience to be terrified. This movie had planted the idea of passing electricity through the brain conjures up the image of the electric chair, a punishment reserved for societies most monstrous criminals. Some may think that it is similar like changing someone into Frankenstein or a zombie by erasing their minds.

Let’s move away from fantasy and back to the facts. A recent meta-analysis of the UK ECT Review Group, ECT has been found to be superior in major depression compared to antidepressant pharmacotherapy. For non-treatment-resistant depression response rate is between 80-90% and even up to 100% have been observed. As for the drug-resistant depression, it is expected to show a lower response rate of about 50-60%. [4] The response time for ECT takes only 1 to 3 weeks compared with 4 to 8 weeks needed for antidepressants, so clearly ECT is more effective to treat severe depression. [5]

As for the memory loss, it is usually related to the number and frequency of ECT treatments and appropriate oxygenation during treatment. Some memory loss is infrequently permanent, but most memory returns to full capability within several weeks. [6] Dr. Devanand, who ran Columbia's ECT Service for 15 years, said "Memory loss today is very limited in most cases, and the loss is patchy and primarily for events during and just before and following the ECT course. So the patient may not remember one of the nurses on the ward but will recognize the other nurses." [7] Therefore, the possibility for patients to have permanent memory loss from modern ECT treatment is small.

The next element of the debate in science and society involves with 'informed consent'. In the past, doctors did not give proper information regarding the treatment they were giving to the patients. Many of the information were bias and sometimes they did not inform their patients about the side effects. This was also one of the issues that leads to the protesting of the survivor groups mentioned earlier. Linda also cites Max Fink, a research professor of psychiatry, “the laws of the nation are being changed so that the rights and privileges claimed by physicians are eroding at a very rapid rate”. Linda commented that it was “right” that claims made by physicians were being eroded because they were being unfair and forcibly shock people who didn’t consent.

This is an important controversy because based on a UK study of Rose et al (2005) shows that half of the participants had not received sufficient information about ECT procedure and its side effects, and approximately a third perceive themselves to have been forced into having the treatment. [8] This situation has changed as it became compulsory to obtain informed consent from the patient and his or her family as part of the pre-ECT work-up.

Informed consents require the provision of adequate information, a patient who is capable of understanding and the opportunity to provide consent in the absence of coercion. [9] ECT informed consent should include information about the indication of ECT, the effectiveness of ECT for the condition, description of the procedure (include before, during and after ECT), routine side effects, rare adverse events, and any condition that may take place. [9]

The next issue concerns about involuntary patients and their rights. Involuntary ECT is used for patients who lack capacity to provide consent. Examples are for acute suicidal, catatonic, or malnourished patients. A question to represent this debate is “How do doctors classify an involuntary patient?” Based on NSW Mental Health Act 2007, a person can be held in a medical facility and considered involuntary when a medical officer decides that the person is mentally ill or mentally disordered as specified in section 19 of the act.

Under the Act it is legal to 'care, treat and control' against the person's will, if 'necessary', 'on reasonable grounds' and for the 'best [clinical] concern' of the patient, in the 'least restrictive manner' available when other avenues of action are unavailable (sections 13 to 16). [8] In NSW, a magistrate's 'mental health inquiry' authorize a medical practitioner or accredited person to personally examine or observe a person, who can be classified as an involuntary patient and continue to be detained in a mental health facility after the initial five days, for a mentally ill person, or one day, for a mentally disordered person, following issue of the initial mental health certificate (sections 23-24 of the act). Consequently, two medical practitioners where one of them is a psychiatrist can request ECT administration for an involuntary patient. [10]

In NSW, it also states that it is the MHRT that grants or rejects such a request and specifies when and how many times ECT treatment can be given to that person (section 94). This decision for (a) a reasonable and proper treatment to be administered to the patient, and (b) necessary or desirable for the safety or welfare of the patient is made after considering the clinical condition and history of treatment of the patient (section 94). [10] Here, the principal ethic of generosity overrides the ethical principle of autonomy (being free from external control or influence) for reason of the person's 'best interest'. [8] As the law holds, ECT is used to treat against patients’ will who are deemed as involuntary patients by the legislation.

Another critique of ECT is the variance of guidelines that involves the standard practice on important points depending on jurisdiction. An example is the guidelines between NICE (2003) in the UK and NSW Government Department of Health (2010) in Australia. According to NICE, treatment should be used to treat ‘severe depressive illness, a prolonged or severe episode of mania, or catatonia’, while NSW allows ECT to be given to patients experiencing major depressive episodes, mania, schizophrenia, schizoaffective disorder, catatonia, malignant neuroleptic syndrome and Parkinson’s disease. [8]

NICE permits ‘advance directives’ to be written by clients, listing their wishes for future action in the event of falling ill while NSW don’t. Lastly, NICE recommends that ECT should not to be used as a long-term treatment to prevent recurrence of depressive illness because the longer-term benefits and risks of ECT have not been clearly established, and ECT should ‘not be used in the general management of schizophrenia’. As for NSW, they permit continuation of ECT to prevent relapse of disease symptoms and recurrence of illness. Patients that can go for continuation or maintenance ECT include recurrent depression, bipolar disorder and treatment-resistant schizophrenia. [8]

Additional to the controversy is the divergence of the views of clinicians and ECT users. Practitioners always seek for the effectiveness of treatment, the successful improvement of disease signs and symptoms whereas patients prefer to know about the overall benefits and disadvantages of treatment, taking into account the release of disturbing symptoms of a disease, cognitive and memory function and quality of care received. The professionals approve that this treatment is the safest and most effective treatment while the consumers consider the negative consequences and uncertainties. This is a huge conflict between the medical professionals and the public.

In the latest issue of ECT was regarded whether FDA should reclassify ECT from high-risk Class III category to a lower-risk Class II. On September 10, 2009, the FDA announced the opening of a public docket to receive information and comments regarding the current classification efforts related to ECT devices; the outcome was 79%, expressed an opinion against reclassification (maintain the Class III designation) while 14% supported the reclassification (reclassify to Class II). [11] In the public docket, the most common type of adverse event reported was memory loss (529 reports) followed by other cognitive complaints (413 reports), brain damage (298 reports) and death (103 reports). [11]

This huge number of protests against ECT is worrisome but we should look deeper into their claims. According to the National Coalition for Mental Health Recovery (NCMHR), individuals who undergo ECT (including the mental health experts) claim that its “disabling effects” which includes permanent memory loss and cognitive deficits outweigh possible benefits. [12] This merger advocates that these potential recipients were informed of the risks before making a choice. By looking at the sources used by NCMHR, all are based from old reports such as Dr. Harold Sackeim, a well-known proponent of ECT, whose 2007 study in Neuropsychopharmacology, and other patients who received ECT in the past before ECT was improved. Linda Andre was also included as one of the sources. [13]

Now, let’s compare with recent news about ECT and see how much progress has made. A 2012 report published in the Proceedings of the National Academies of Science (PNAS), tells about a group of researchers in Scotland used a brain scanner called fMRI. It is used to peer into the brains of nine severely depressed patients before and after they received electroconvulsive therapy. After a few sessions of ECT, they discover that ECT-induced changes in the brain may help to explain why ECT patients often suffer from memory and other cognitive problems, often for months after treatment. The author wrote that if ECT dampens the structure's activity, such effects might be anticipated. [14]

**Conclusion**

With the on-going debate on ECT, it shows that ECT still haven’t been accepted in both worlds between science and societies. To help resolve this problem, the following suggestions may be useful for future ECT. First, patients and their relatives need to be educated with ECT procedure and it should include full and unbiased information. If cognitive adverse effects occur, rehabilitation based on neuropsychological assessment should be initiated and maintained. Since ECT rehabilitation programs are not yet available, clients’ relatives need to be prepared to take care of their clients. Lastly, the staffs involved with the ECT treatment should be educated as well about the side effects, procedure techniques and safety of the patient.

**Resources:**

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