It was more than ten years after my grandfather’s passing when I finally learned the truth surrounding his “minor bouts of depression” and frequent “business trips.” Truth was my grandfather did not suffer from depression at all, he in fact had schizophrenia and his frequent trips were not for business but were to a mental institution for electric shock treatments. Talk about mind-boggling, never would I have thought that the grandfather who always sang silly songs with my brother and me and would buy us ice cream every time we visited had been suffering from one of the most debilitating mental illnesses, schizophrenia. My parents proceeded to tell me about witnessing his hallucinations and delusions and, most difficult to comprehend, his visits to the mental institution to receive electric shock treatment.

After hearing this and seeing the pain in my parents’ faces as they illustrated my grandfather being tied to a bed and forced into seizures, I decided to look into electric shock treatment and it’s use in schizophrenic patients. Knowing little about this seemingly barbaric form of treatment I was definitely intrigued by the amount of controversy surrounding it. Many believe whole-heartedly in it’s use as a treatment and many others find it as barbaric as it’s name. The truth is that although electro convulsive therapy (ECT) has a bad reputation and although there is little proof regarding it’s success in treating schizophrenic patients, it does seem to have some redeeming qualities.
Fortunately for those suffering from Schizophrenia, there is a new treatment that is being explored called Transcranial Magnetic Stimulation (TMS).

In order to understand ECT and its use in schizophrenic patients it is important to understand what schizophrenia is and how this form of treatment therefore originated. Schizophrenia is a chronic brain disease that in many cases is disabling. It effects about 1 percent of the population during their lifetime and more than 2 million Americans suffer from it in a given year (Spearing 1). That may not seem like much at first glance but when one of those 2 million people is someone close to you, you tend to find those statistics staggering.

Initially, I believed that this illness was hereditary because mental disorders have always run in my family; however, research indicates that there is no one cause for schizophrenia. There are numerous factors including biological factors, social factors and psychological factors that need to be considered and intertwined when trying to determine its cause. One popular opinion is that of Patricia Barry who states that “research has demonstrated that there is an association between the behavioral symptoms of schizophrenia and the presence of elevated levels of dopamine in schizophrenic patients.” Please be careful to notice the word association. This by no means states that elevated dopamine levels cause schizophrenia they just tend to be present in many cases. As I stated earlier there is no one cause for this disorder and research is still being done as we speak to determine its origin.

The symptoms of this disease are perhaps the most staggering of any mental illness. Three of the most common are thought disorder, hallucinations, and delusions, although there are many more than can occur. My grandfather suffered from several of
these symptoms, however, as his illness progressed each of these three symptoms became more and more prominent.

Thought disorder is typically occurring when little sense can be made of a patient's words and/or thoughts. Marengo, Harrow, and Edell define this as “a disturbance in the organization, control and processing of thoughts” (Gostello 27). My parents tell me that in my grandfather’s case, you would find him at times rambling about various things that had no obvious connection. My dad would be having a discussion with him about the Chicago Cubs (his favorite baseball team) and right in the middle he would start talking about what he had for dinner the other night or his squadron in the army. You could eventually get him to come back to the original discussion but it always took some coaxing.

Another common symptom of Schizophrenia is hallucinations. Hallucinations are probably the most painstaking yet obvious symptom, where the patient “sees” things that are not really there. Heilbrum calls these hallucinations “sensations that are believed to have their origins outside of the body” (Gostello 57). In my grandfather’s case, he saw people waiting outside his house or following him home. This symptom is particularly difficult to handle from an outside standpoint because you can not make the patient believe these images are not really there because they can actually “see” them with their own eyes and, in fact, can not understand why you can’t.

Delusions basically go hand in hand with hallucinations in most instances. A patient suffering from delusions believe things that can not be explained. For instance, my grandfather believed that people from the army were after him. He believed this day in and day out. This was a delusion. At times, however, he would actually “see” them
waiting outside his house. That was his hallucination. My father spoke about times when he and my mother would literally be locked inside his home because he was afraid that the people outside waiting for him would hurt my parents. My dad would in turn look out the window and seeing nothing but the trees. It was a very scary situation to be in.

When schizophrenia first came to light, little was known about it’s cause and in turn very little was known about how to treat it. How do you treat something when you do not know what is to be treated? Many different theories of treatment options were thrown out such as specific medications and psychotherapy all of which treat only the symptoms of schizophrenia. Most interesting was the idea of electric shock treatment.

ECT was first originated in the 1930’s by Hungarian psychiatrist Ladislas Meduna. Meduna, however did not shock his patients to induce seizures, he injected them with different convulsive agents such as strychnine, thebaine, and camphor to name a few. He later settled with Metrazol which was a little safer and more reliable.

While Meduna was injecting his patients with Metrazol, Viennese psychiatrist Manfred Sakel was injecting doses of insulin into his patients to induce a coma, or hypoglycemic shock. Both forms of “treatment” were only used in the most serious of cases and were not getting the most favorable of results. From this point on many psychiatrists jumped on the bandwagon and tried their hand at shock treatment and other “interesting” forms of treatment such as psychosurgery aka lobotomies. By the early eighties psychosurgery and insulin coma treatments were just about dead but electroshock treatment was still in use only a little tamer. They now would put you to sleep, give you a muscle relaxant and then shock you with electrodes as opposed to
ECT of today is definitely different than it was back in the 1930’s, however, the basic premise is the same. The MEDLINEplus Medical Encyclopedia tells us how this test is performed. “An IV is inserted to provide anesthetic medication. Your vital signs are taken initially and continuously throughout the procedure. An anesthesiologist administers anesthesia, and after you are asleep, places a tube in your throat to help you breathe. A paralyzing agent (called succinylcholine) is then administered to prevent the seizure from spreading to your body. The electrodes are then applied to your head with conducting jelly and a brief shock (less than 2 seconds) is administered. When you awaken you will feel mildly disoriented and will probably experience a brief memory loss, but this will pass” (MEDLINEplus). As you can see, the procedure is a lot different now than it was back in the 30’s, but the question remains is it necessary? Is there another form of treatment that can produce the same results with less physical harm? There are many different views on this. Some feel it is definitely worth the results and others feel that it is just as barbaric as it was when it was first instituted.

One of the redeeming qualities of ECT is that research does show that it has been effective in the treatment of severely depressed individuals. Some proponents of ECT find that unfortunately the stigma surrounding ECT overshadows the effectiveness of it. This stigma has been publicized in such movies as One Flew Over The Cuckoo’s Nest. The public tends to be frightened by the use of ECT and in some respects is not explained fully to patients due to this.

Although there are several adverse effects to ECT such as retrograde and anterograde amnesia, biting of the tongue, and even worse, complete relapse the fact does
still remain that it works for some. According to a report published by the American Psychiatric Association Committee on Electroconvulsive Therapy, “ECT has had response rates reported in the range of 80% to 90% as a first line treatment and in the range of 50% to 60% for patients who have not responded to one or more trials of treatment with antidepressant drugs” (Glass 1347). The question remains are these numbers high enough to sustain the backlash of a treatment that for some can be fatal? Keep in mind that these numbers are based on a study with depressed individuals, not those suffering from schizophrenia.

One primary concern with this treatment is its use. Although it can be effective in certain depression cases there is very little evidence that it is effective in schizophrenic patients. Lorraine Rother is an RN dealing with patients with deep depression and works with ECT. What is interesting is that her own grandmother was given ECT treatments years back and although it had been a harrowing experience her views of ECT are positive.

Rother’s take on ECT is that today it is a safe technique that should be used in only certain cases. She states that “Although ECT has attained a respectable position in treating severe mental illness, it has limitations. It isn’t effective against neuroses, thought disorders, personality disorders or grief reactions.” However, in situations where it is effective, Rother feels it is almost necessary (Rother 48). I can agree with Rother’s position here because she states that ECT can not be used as a catch-all technique. In fact one of the disorders that she states it is ineffective against is thought disorder which is a leading symptom of schizophrenia.

Although there are many drawbacks to ECT, there are also clearly many places
where it can be useful, even needed. ECT does seem to have a profound effect on certain cases of severe depression and therefore there are several doctors and patients alike that feel that ECT is very successful. Dr. Moscarillo states that “It’s the single most effective treatment for delusional depression” (Toto 2). He also states however that it is not very easy to convince patients that it may help them due to the stigma attached to it. One patient, however, states that “maybe it doesn’t work for some people, but these new pills don’t work for everybody, either. Looking back I am certain I did the right thing” (Toto 2). It is obvious that those who do agree with this procedure feel that it is the only form of treatment that can help them conquer their illness. Which is definitely something to consider. Is it fair to rip away from severely depressed individuals the only treatment that they find to be helpful?

It is safe to say that the proponents of this treatment feel very strongly about their convictions. It is also safe to say that much of their defense is valid. If it works for you, why wouldn’t you defend it? But, what about the other side? What about those that feel that ECT is a treatment that has done more harm than good? Just as there are proponents to ECT there are opponents. In fact, today ECT is used far less than in the past and gets more negative feedback than positive.

Let’s look at why. ECT has always had somewhat of a barbaric image whether it be due to books and movies or for personal reasons. I must admit that when I first learned that my grandfather received ECT treatment I was appalled. My reasoning for being appalled was more so due to the fact that I knew very little about it besides that it’s own name sounded horrifying. Some people, however, feel this way for good reason. They have researched it, experienced it, or seen it for themselves and feel that One Flew
Over The Cuckoo’s Nest was right on the money.

First let’s look at the medical professionals that feel this treatment needs to be abolished. There are those that feel that ECT is ineffective and there are those that simply feel it is unnecessary and the idea of it wrong. One Bethesda doctor stated “If a woman got an electric shock from her refrigerator, they’d whisk her off to the Intensive Care Unit, I’m not sure why ECT seizures should require a different response” (Toto 2). Definitely one way to look at it. This quote typifies the feeling of those who just can’t grasp the concept of forcing someone into seizures in order to make them feel better. This is an opinion that is shared by many of ECT’s opponents.

There are also those that believe ECT is wrong simply because it is ineffective and at times used inappropriately. Especially in those cases concerning schizophrenic patients. Psychiatrists Hannafay and Fatma Youseff believe ECT has not only been used unnecessarily but also inappropriately. When first introduced, ECT was used in Schizophrenic patients, however there was no evidence that it altered the schizophrenic process for the first 50 years it was used. Later, it was found that it may have an effect but no more an effect than hospitalization or anesthesia alone. Nowadays, most psychiatrists find this form of treatment unnecessary however, some believe it to be at least equal to other forms of treatment. This just furthers the belief that if we are not receiving resounding statistics regarding the effectiveness in schizophrenic patients why is it still being used?

Also, let’s not forget those that feel ECT should not be used because it results in long term deficiencies of the patient. There has not been a lot of research done of the cognitive effects of ECT but there has been some and there are signs of much more to
come. However, the little research that has been done seems to show that there are severe long term effects. A small study from the Journal of Psychological Medicine concerns short term memory and frontal function after ECT treatment. This study which was performed by Spanish scientists is the first report of cognitive side-effects. In this study, colleagues compared depressed patients that had never had ECT with patients that had previously. The researchers found that “compared with controls, M-ECT patients showed alterations in verbal fluency, mental flexibility, working memory and vasomotor speed” (Lamb 2). There were no significant correlations, however, between the number of ECT sessions and cognitive measures. But this research is a step in the right direction. If ECT does result in severe long term effects what are we sacrificing for short term relief?

Another concern with the treatment of ECT is the prevention of relapse. ECT is treatment to only the patients symptoms, therefore, there is always the possibility of those symptoms returning. If relapse rates are high, than the consensus is “why bother?”. Several studies have been done to test relapse rates. One of which was performed by Harold A Sackheim, PhD, et.al. In this study, Harold took groups of patients specified by his research organization and separated them into three groups: a placebo group, a nortriptyline group, and a nortriptyline and lithium group. Each group had received ECT prior to continuation treatment. These groups received continuation treatment for 24 weeks. The purpose of this study was to determine relapse rates comparative among the three groups. What they found was that the relapse rate for placebo was 84%, for nortriptyline, 60%, and for nortriptyline and lithium, 39%.

The point of this study was to show what kind of continuation therapy produced
the lowest relapse rates. Therefore, the issue at hand was not is ECT effective, but what will help ECT to prevent relapse rates. Interestingly, however, the information it showed about ECT, in general, contradicted Sackheim’s own original observations. Sackheim states in the beginning of his study that “Naturalistic studies show that the relapse rate during the 6 to 12 months following ECT exceeds 50%.” Interestingly enough, however, his own study shows a relapse rate of 84% of those who initially did respond to ECT, 60% of those who received nortriptilyne, and 39.1% of those in the nortripyline and lithium group. Therefore, relapse rates for those without continuation treatment FAR exceed the 50% he originally stated and even those with the best continuation treatment of his study have a relapse rate of near 50% (Sackheim 1). With relapse rates this high some believe that ECT is a far cry from effective.

Most importantly, are the results and the accounts of ECT patients. While there are some that have found it to be a dream come true, there are those whose feel they lived through a nightmare. Patient Elizabeth McGillicuddy had very little luck with ECT. Not only did the treatments have very little effect on her depression, they profoundly affected her memory. She states “It’s like you’re climbing up a mountain, and you look down, and the mountain is not there. It’s gone. There’s no way to describe how horrifying that is. Those people killed the person I was” (Toto 3). That definitely strikes a nerve. I, for one, pride myself on my memory, I remember the most inane details, I can’t imagine if I woke up one day and that was gone. This unfortunately is the very real fear that many prospective patients of ECT have to face. Some will have great luck, others will get far more than they bargained for.

Fortunately for those sufferers of Shizophrenia that do not benefit from ECT
treatments, there is a new treatment that is being explored called Transcranial Magnetic Stimulation. This treatment stems from the idea of ECT but is much safer and has had better preliminary results. This treatment is preliminary but it is worth examining because it could one day be the treatment that replaces ECT altogether.

Transcranial magnetic stimulation (TMS) is a relatively simple and, for the most part, painless way to electrically stimulate brain regions. It was invented 15 years ago and has been making waves ever since. One researcher states “There’s preliminary evidence that TMS offers a less dramatic alternative to ECT” (Travis 206). Although ECT may at times be effective, it is definitely a more crude form of treatment. There is hope that TMS can have the same if not better effect that ECT has without the adverse effects and virtually painless.

One study that has been done regarding TMS is with schizophrenic patients. It was done at the Yale University School of Medicine and reported that “TMS significantly reduced auditory hallucinations experienced by a dozen people with schizophrenia” (Travis 205). Some patients that participated in the study state that they have been free of hallucinations for the first time in years. While this is all wonderful to hear, we need to remember that these are preliminary studies and there is much that we don’t about how TMS affects the brain. However, this definitely looks like a step in the right direction.

It is obvious that ECT is a hotly debated and extremely controversial subject. There are not necessarily any rights or wrongs and it certainly is not black and white. What there is however is significant research that is being done everyday to determine whether ECT should be used in certain cases or even at all.

After reviewing the research it is clear that ECT is useful in some cases.
are patients and doctors alike that believe wholeheartedly in this treatment and it is hard to argue with those that have had success. ECT does seem to have a profound effect on certain cases of severe depression and as long as it is successful and there are patients wanting to use it they should have that right. A concern worth noting, however, is that it is being used in too many cases without results.

ECT should not always be used in schizophrenic cases. There has been little research to indicate its success and in the cases where there has been success it has been no better than with less aversive forms of treatment. My grandfather was subject to many sessions of ECT and still suffered with schizophrenia to his death. All ECT did for my grandfather was give him comfort in the fact that he was trying to do something. Luckily he did not have many long term adverse effects but there are many that don’t get that lucky. Patients of schizophrenia already suffer from the most chronic and disabling disease, do they have to suffer from what has been considered the most crude form of treatment also?
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