Setting the shock record straight

The electroconvulsive therapy myth

By JEFF MAHONEY

A young graduate student watched intently as the lab attendants fitted the electrodes onto the patient's temples. The machine was large and crude, with thick metal arms and electrode pads that clamped onto the patient's head like some sinister parody of a halo. To the student, the machine was an exciting new therapy, in its infancy and still shrouded in controversy. He was keen to see it

Onæ the electrodes were in place, the experimenters prepared to turn it on. No anaesthetic, no muscle relaxants. Suddenly 100 volts crackled through the patient's brain. At the same instant the student witnessed a scene that would haunt his memory

The jolt triggered a convulsion so extreme that the patient had to be held down by four men. Despite that, his body jerked violently. The student heard the man's back crack and saw his eyes roll up into his head.

"I'm certain he broke his spine," says psychology professor Norman Endler, describing a day in 1956 when he saw electro-shock therapy for the first time. He was so revolted he became an outspoken opponent of the technique for the next two decades. "Back then, crude methods of electro-shock therapy, now known as electroconvulsive therapy (ECT), often led to back and leg fractures.'

The second time Prof. Endler was exposed to ECT was 21 years later as a patient. It was an experience that changed his mind.



In the late 1970s, Prof. Endler became manic depressive. As in many such cases, the causes were entirely biochemical. Depression, it seems, is often related to imbalances in the body's production of neurotransmitters (chemicals in the body which transmit nerve impulses across a synapse). The convulsions triggered by ECT seem to correct those imbalances in ways that science doesn't completely understand. ECT is a very effective treat-



drugs.

Prof. Endler was reluctant to try ECT treatment at first. But his depression had worsened, and he was getting desperate. "I started waking up at nights and couldn't go back to sleep. Then I lost my appetite and sex drive. I felt incompetent and indecisive, to the point where I couldn't decide on what pair of socks to wear in the morning."

He couldn't use antidepressant drugs because they inhibited his urination, so he finally agreed to undergo ECT. He had seven sessions over several weeks. At the end of the seventh session all symptoms of his depression vanished.

Despite great success and refinements, ECT is still surrounded in myth 50 years after it was first developed in Italy - tales of brain damage, memory loss and confusion abound. "ECT may destroy some brain cells," admits Prof. Endler, "but no more than the process of aging would." Confusion, when it does occur, never lasts for more than a few months, and sometimes doesn't happen at all. Even in the early days, when ECT was being misused, memory loss was never more than a temporary side-effect. The biggest problem was broken bones, which has since been eliminated. Now the most risky part of ECT is the anaesthetic, says Prof. Endler.

In the early days, ECT was wrongly seen by many as a panacea for disorders of the mind. Psychologists and psychiatrists began using ECT for everything from schizophrenia to psychopathic behaviour. It was even used to treat ulcers.

"The Nazis experimented with ECT as a method of mind control, but it didn't work," says Prof. Endler. "In the movie One Flew over the Cuckoo's Nest the main character is diagnosed as psychopathic and is given ECT, even though it is not very helpful for that kind of problem." The treatment is mainly useful for depression, and sometimes schizophrenia, he says. ECT is usually done now with a person's consent.

Patients are anesthetized and given muscle relaxants. The unwieldly machine of the past has been replaced with a radio-size model, and electricity is administered only to the nondominant side of the brain, instead of both the dominant and nondominant sides. The dominant side houses memory and critical functions such as rational thought. By avoiding the dominant area, memory loss and confusion that accompany ECT are reduced.

And because ECT has advanced so far over the years, the only visible sign that a patient is undergoing therapy now is a slight twitching of the big toe.

However, people are still suspicious of ECT. The tenacity of the term "electroshock" doesn't help, conjuring up, as it does, images of torture and abuse. Prof. Endler recently was on the Sally Jesse Rafael Show speaking about ECT therapy. "I asked her not to use the term 'electroshock.' She didn't for a while, but then she lapsed back."

Prof. Endler says most people confuse ECT with the scenes from A Clockwork Orange, where Alex undergoes behaviour modification. "But that was eyelid conditioning, not ECT," says Prof. Endler.

While ECT may still have a bit of an image problem, its track record has kept it in use for half a century, unlike another well-known form of psychiatric therapy developed at the same time - the lobotomy. The ultimate goal for science, says Prof. Endler, will be to develop an antidepressant drug that can make ECT obsolete. Until then it's the best medicine available for people suffering symptoms of manic depression.

Prof. Endler's new book, with coauthor Dr. Emmanuel Persad, is on the history and basic issues surrounding ECT. Called ECT: The Myths and Realities, it was published this

(Alumni News)

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