DATB: Shock Therapies

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ESP Splash (Sunday)

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Shock therapies

History:
Motivation: Perhaps fever is beneficial, and syphilis patients who don’t have fevers might improve if they could have a fever.

1917: Dr. Julius Wagner von Jauregg intentionally gives neurosyphilis patients malaria to cause a very high fever. He notices that if they have febrile seizures, they get less crazy and less depressed. He wins the 1927 Nobel Prize for this work.
Shock therapies

Motivation: Maybe crazy people’s brain cells are tired and need to rest. Let’s induce a coma to provide that rest.

1927: Dr. Manfred J. Sakel gives schizophrenic patients insulin to induce coma, many of them are improved upon waking. Those who have seizures along with their coma improve the most.
Shock therapies

Motivation: I’ve never seen a schizophrenic epileptic, therefore the diseases must be mutually antagonistic. (This theory is dead wrong and Dr. Meduna’s observations were due to coincidence)

1934: Dr. Ladislas Joseph von Meduna gives schizophrenic patients various convulsants to induce seizure. He tried camphor, strychnine, thebaine, pilocarpine, and pentylenetetrazol (metrazol).
Shock therapies

Motivation: Dr. Meduna’s drug-induced seizures are incredibly dangerous. Let’s try using electricity instead.

1937: Dr. Ugo Cerletti uses electric shocks to induce seizures in schizophrenic patients.
Shock therapies

Over several decades:
- It was noticed that shock therapy is completely ineffective for schizophrenia, but it is very effective for depression
- Paralytics (including succinyl choline and vecuronium) were introduced to relax the muscles and prevent broken bones
- General anesthesia was administered before the seizure to prevent panic and pain
- The electric shock was applied only to one half of the head, or only to the front, to minimize memory loss
ECT and Frontal Lobotomy

• Dr. Walter Freeman used ECT instead of drug-based anesthesia when performing frontal lobotomies.