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EXTRA CONTENT ONLINE

Psychiatry in History

Dr Manfred J. Sakel: discoverer of insulin shock therapy

Alexander Wellington

Dr Manfred Sakel was an Austrian American neuropsychologist and psychiatrist credited for introducing insulin shock (or coma) therapy (IST) as a treatment for psychoses, especially schizophrenia (1927). He conceived the idea shortly after graduating in medicine at the University of Vienna (1925) while working as an internist at the Lichterfelde Sanatorium in Berlin. Sakel allegedly induced prolonged convulsions and superficial coma in a morphine addict from an accidental overdose of insulin after which the patient woke with enriched mental clarity and a diminution of withdrawal symptoms (i.e. tremors, vomiting and opiate craving). Later Sakel coined the method 'Sakel's technique'. He theorised that insulin antagonised the neuronal effects of the products of the adrenal cortex which (he quoted) 'will force [the nerve cell] to conserve functional energy and store it to be available for the reinforcement of the cell'. He experimented with animals, supposedly from his private kitchen to ensure that hypoglycaemia can be reversed safely, permitting deeper induced comas without harm. His findings were first published under the title, 'New treatment of morphine addiction' in the *Deutsche Medizinische Wochenschrift* (1930).

Sakel returned to Vienna as a research associate at the University's neuropsychiatric clinic (1933). Despite initial opposition from his supervisor, Sakel successfully persuaded them and patients were induced to 5–6 comas per week until amassing 50–60 comas or a normal psychiatric response was achieved. According to his reports, 70% of patients had a full remission, 18% had a 'social remission' and a total of 68% were discharged whereas 2 years prior to his arrival 20% were discharged. His experiences were reported in the Vienna Medical Society (1933) and in 13 publications (1934–1935) wherein he further claimed an over 88% improvement rate.

He earned international attention as documented in his obituary: 'psychiatrists from all over the world went there to learn from [him]'; among them was Dr Isabel Wilson, Commissioner of the Board of Control for England and Wales, who visited Vienna to confirm the efficacy of IST (1936) and who later published a 61-page report entitled *A Study of Hypoglycaemic Shock Treatment in Schizophrenia*. IST was positively reviewed in esteemed medical journals and by 1938, there were 31 psychiatric hospitals with insulin coma units in England and Wales.

Sakel emigrated to the USA (1937) with the help of Joseph Wortis who translated his 1938 book *The Pharmacological Shock Treatment of Schizophrenia*. Sakel resumed study at the Harlem Valley State Hospital which became the first hospital in the USA to adopt IST. However, this saw a decline due to the integration of electroconvulsive therapy (ECT) into psychiatric practice; as depicted in 1956 at Severalls Hospital in Essex, wherein 39 patients received IST and an overwhelming 432 patients received ECT.

Sakel persistently defended the use of IST and continued treating patients privately at the Murray Hill Hotel on Park Avenue and the Slocum Clinic in Beacon, New York, affording him a reputation of being arrogant and driven by greed. He remained single until his death of a myocardial infarction at age 57.

His contribution to psychiatry remains historically significant even though IST is no longer in use.

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