AN ARTICLE REVIEW

Biological Treatments In Psychiatry Before The Introduction Of Pharmacotherapy

By M. Shehab

The history of effective biological treatment in psychiatry is rather recent. The first successful treatment for any mental illness was the malaria treatment for general paralysis introduced in Vienna by Wagner-Von Jauregg in 1917. It remained unclear whether the infection or the increased body temperature was responsible for the clinical improvement (Frank-Ayd & Barry Blackwell, 1970).

Attempts to use malaria and other fever-producing methods in schizophrenia were made by Paul Hoch with no success.

In 1922, the Swiss psychiatrist Klaesi introduced the so called continuous sleep treatment, which can be considered the first modality of a somatic treatment used in the functional psychosis. The depth of the narcotic state induced by various hypnotics and the length of time during which patients were kept unconscious seemed to determine the beneficial effect. Acute excitement states of catatonic and manic patients responded best, but as a whole, results were unsatisfactory (Frank Ayd & Barry Blackwell, 1970). Opium was used in depression with unconvincing results. The treatment was based on the assumption that sleep, the real healer, brings relief of mental anguish and tension (Frida Surawics & Arnold Ludwig, 1983).

Insulin shock treatment was introduced in 1933 by Sakel. It was the first method of treatment directed at schizophrenia. Sakel began his work in Berlin but later moved to Vienna where he established the technique of insulin coma treatment. At that time insulin had already been used in small doses for some psychiatric patients for sedation and general build-up. Schizophrenic patients who happened to be hypersensitive to insulin and went into a hypoglycemic coma with unexpectedly low doses of insulin, sometimes lost their psychotic

symptoms temporarily. This gave Sakel the courageous idea to produce hypoglycemic coma in schizophrenia at will. It has been claimed that insulin coma therapy is actually a form of group therapy while the physical changes play no direct part in treatment (Okasha, 1988).

In 1934, the Hungarian psychiatrist, Von Medunna introduced another method of treatment for schizophrenia in Budapest by producing convulsive seizures. This was based on the observation that mental patients who, for some reason, had spontaneous convulsions, temporarily lost their symptoms. Prior to Von Medunne, another Hungarian psychiatrist, Nyoro, had injected serum of epileptics into schizophrenic patients; but this turned out to be ineffective. Medunna then took the next step and produced actual seizures in schizophrenics. He first used camphor in oil to produce seizures, then replaced it with i.v. injections of cardiazol (metrazol). This led to dramatic changes in many patients. Few years later A.E. Bennett from America emphasized convulsive therapy for its great value in depression.

In 1937, Cerletti and Bini introduced E.C.T., a simpler and cleaner way to produce seizures. Although many antidepressants have been produced, E.C.T. is still an urgent and essential treatment in about 30% of cases of severe depression, with good results in about 90% of cases (Okasha, 1988).

Later, Meduna moved to USA where he developed a new biological treatment designed for the psychoneurosis. It consisted of carbon dioxide inhalation applied to patients in repeated sessions and producing various degrees of unconsciousness. The treatment was based on a biological theory of Meduna regarding the etiology of psychoneurosis; but it was never widely applied (Frank Ayd, 1970).

In 1935, Moniz and Lina from Portugal initiated neurosurgery in schizophrenia. They performed the first surgical intervention on the frontal lobes of a schizophrenic patient by means of alcohol injection.

Later, in the same year, they destroyed the same fibres with a blunt instrument called Leukotome. Walter Freeman from America modified neurosurgery to prefrontal leucotomy.

It may be mentioned that Wagner-Von-Jauregg and Moniz are the only neuropsychiatrists awarded the Nobel Prize.

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