

Robert Daniel Lawrence: diabetic and pioneer of the diabetic clinic

This year marks the 50th anniversary of the death of Robert Daniel Lawrence. He was one of the first diabetics in this country to be treated with the newly isolated insulin and went on to devote his life to the management of the diabetic patient.

First, a note on the story of insulin. Diabetes, a disease characterized by weakness, thirst and polyuria, was recognized from ancient times. The Greek physician Aretaeus (AD 81–138) first applied the term to the disease from the Greek word for a siphon. The sweet taste of the urine in the diabetic patient had been noted by the ancient Indian physicians, but was rediscovered by Thomas Willis, the Oxford physician, who also described the arterial anastomotic channel on the base of the brain.

Insulin was isolated from the pancreas of the dog by Frederick Banting and Charles Best (at the time a medical student), in the Department of Physiology at the University of Toronto in the summer of 1921. The work was published the following year in the *Journal of the American Society of Physiology*. (In 1923 they were awarded the Nobel prize for medicine.)

Now to return to our anniversary. Robert Lawrence was born in Aberdeen in 1892. His father was a brush manufacturer. Robert studied medicine at the University of Aberdeen and qualified MB ChB (Batchelor of Medicine and Batchelor of Surgery), with distinction, in 1916. This was, of course, in the middle of the First World War and he immediately joined the Royal Army Medical Corps and served with the Army in India.

After demobilisation in 1919, Lawrence became a casualty officer at King's College

Hospital, London and then, in 1923, house surgeon at King's. His ambition was to become an ear, nose and throat surgeon. While practising the operation of mastoidectomy (a common emergency procedure in those pre-antibiotic days), in the post-mortem room, Lawrence received an injury to the eye from a splinter of bone.

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The subsequent severe acute infection of the wound resulted in the discovery of sugar in his urine and the diagnosis of severe diabetes; at that time, this diagnosis amounted to a death sentence.

To save distress to his family and also to die, as he expected, in a year or two, in pleasant surroundings, Lawrence went into general practice in Florence. Soon afterwards, in response to a telegram from his colleagues at King's, to return home at once (presumably to be told about the development of insulin), he drove across Europe to reach King's on 29 May 1923; by now he was in a state of severe diabetic ketosis. As one of the first patients in the country to be treated with the new drug, Lawrence made an excellent response to insulin.

Lawrence was now appointed biochemist at King's College Hospital, with the remit to research the administration of insulin and on the dietary control of diabetes.

In 1931, the new diabetic department was opened at King's with Lawrence in charge, with the rank of assistant physician. He was promoted to full physician in 1936. The diabetic department, of the greatest importance in the management of the disease, was one of Lawrence's major achievements, a model for the clinics that were to become established throughout the country.

Lawrence was only too aware of the need to teach his patients how to care for themselves. As early as 1925, the first edition of his book *The Diabetic Life* was published. This was designed to bring the management of diabetes within the understanding of the patient and his/her doctor. The book was translated into many languages and its 16th edition appeared in 1960.

In 1934, together with other well-known diabetics, including the author HG Wells, Lawrence founded the British Diabetic Association. Similar bodies were founded around the world, followed by the formation of the International Diabetic Association. Lawrence became president of both these bodies. The *Diabetic Journal* commenced publication in 1935.

Lawrence's teaching and publications were characterized by their simplicity of thought and clarity of expression. I remember well as a medical student reading his book, which I found of great help to me, having found the section on diabetes in my student's medical textbook rather obscure on this particular subject.

The outbreak of the Second World War in 1939 interrupted or postponed many of the activities of these organizations. In the food rationing that was soon introduced, Lawrence's expert advice to the Ministry of Food resulted in the special rations which were made available to diabetics.

In 1929, Lawrence married a schoolmaster's daughter. They had three sons, two of whom qualified as doctors. Outside of medicine, Lawrence's interests were fly-fishing and classical music; he said that Beethoven had a major influence on his life. He died, peacefully at his home, on 23 August 1968 aged 73 years; a truly remarkable pioneer in the care of the diabetic patient. Through his work and his writings, he influenced the lives of millions of diabetic patients throughout the world. **BJHM**

Conflict of interest: none.

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