Historical Archives of Italian Nephrology
Diabetic nephropathy and insulin discovery: Two parallel histories

In 1936, Kimmelstiel and Wilson described the nodular glomerulosclerosis in patients with diabetes mellitus on insulin treatment. The nodular glomerulosclerosis is referred to as diabetic nephropathy.

Fifteen years earlier insulin was discovered. This discovery at the University of Toronto (Canada) in 1921-22 by Banting, Macleod, Best and Collip was one of the most dramatic events in the history of the treatment of the disease. The impact of insulin was so sensational because of the incredible effect it had on diabetic patients. Those who first watched starved, sometimes comatose, diabetics receive insulin and return to life witnessed one of the genuine miracles of modern medicine. The discovery has became the “elixir of life” for millions of human beings around the world. Insulin had not emerged out of a vacuum but was the culmination of years of work by dozens of scientists in many countries. The Canadian scientists were the first to succeed in isolating insulin. Their work, however, was accurately constructed to confirm the ideas of earlier researchers, such as Murray, Paulesco, Allen, Minkowski, Derwitt, Zuelzer. These men, in addition to Banting, Macleod, Best and Collip, knew they were making medical history but paradoxically, with their “elixir of life” they allowed some complications of diabetes to emerge. Diabetic nephropathy was one of them. The struggle of the “Toronto quartet” for credit was inspired by man’s desire to have a place in history, to have a sort of immortality open to him, an aspiration that is certainly legitimate. But perhaps the Canadian group misjudged both their situation and posterity’s point of view. They probably failed to consider the unintentional effect of insulin treatment: diabetic nephropathy as a consequence of adding years to a diabetic’s life. (G Ital Nefrol 2003; 20: 625-30)

KEY WORDS: Kimmelstiel, Wilson, Nodular glomerulosclerosis, Canadian quartet, Elixir of life