OSKAR MINKOWSKI & PANCREAS

Oskar Minkowski (1858-1931) was born at Alexoten, Russia. He studied medicine at Strasbourg and received his Doctors degree at Konigsberg under the renowned Bernard Naunyn. He sought practical bedside findings from experimental study of metabolic disorders. Unfortunately, Claude Bernard had discounted the role of pancreas, as the cause of diabetes. Minkowski was curious to learn, whether a dog could survive after removal of pancreas, and if so, what effects it would have on digestion of fats and proteins. This crucial study on pancreas, proved to be one of the most important, unexpected experimental observation in the history of diabetes. It was performed along with Joseph von Mering, while working as assistant to Naunyn in 1889. The development of massive glycosuria, within 24 hours after pancreatectomy, was a new finding.

Following the chance observation, though neither Mering nor Naunyn devoted full attention to the subject, Minkowsky conducted additional investigations, to find out whether other injuries or lesions produced by operation were responsible for the glycosuria. Diabetes did not develop when the pancreas was removed from the site, with intact vascular connections with duodenum, or when only partially removed. Thus, Minkowsky produced convincing evidence that only after total pacreactomy, did glycosuria appear, followed by death of the animal, whose liver contained extremely little glycogen. Pancreas was definitely implicated, but what part, or which cells, remained for others to discover. Earlier, Paul Langerhan's findings, of “ductless, mysterious, polygonal cells, scattered like islands” (1869), had apparently remained insignificant.

Although the 1890 report gave Minkowsky a junior position to Von Mering and Naunyn, a communication from Minkowsky, to the Societe des Naturaleset medicines the Strasbourg, forwarded to Semaine Medicale, May 20, 1889, credits Minkowsky for the discovery, with scientific announcement in the journal.

Minkowsky was Bernard Naunyn's brilliant pupil, a clinician of unusual intelligence, who used critical judgement at the bedside, as well as in the experimental laboratory. His name remains topmost among those who contributed to the understanding of pathogenesis of diabetes mellitus. He was one of the outstanding clinical-chemist in the great days of German medicine in a generation prior to World War I.