

## DEVELOPMENT OF NEPHROLOGY

## Associate Professor Eduard Neubauer: the first nephrologist in Slovak Republic



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## Abstract

Associate Professor Eduard Neubauer, MD, PhD. worked from 1945 to the end of 1964 at the Department of Internal Medicine of Faculty Hospital and Medical School of P.J. Šafárik University in Kosice, which was led by Professor František Pór. During this period he was dealing with clinical and experimental nephrology, as the first in Kosice and in Slovak Republic also. In 1954 he founded the Clinical Nephrological Laboratory according to the model of Prague laboratories led by Professor Jan Brod. He devoted himself to functional examination of kidneys. He was especially interested in

clearance methods in the diagnosis and treatment of renal diseases and hypertension. He published altogether 55 scientific works in domestic and international journals. In December 1964 he left Czechoslovakia and went with his wife to Canada. After retirement he lived in Ottawa, where he died in 1983.

**Key words:** Eduard Neubauer, Nephrological laboratory, renal function examination, the first nephrologist in Slovak Republic

Associate Professor Eduard Neubauer, MD, PhD. (Figure 1) was born on October 24, 1910 in Nitra. He studied at the Faculty of Medicine in Bratislava, Comenius University, where he graduated on December 13, 1935. After graduation he worked at the Department of Internal Medicine in Nové Zámky and Trenčín. During the Slovak State he was in labor camps for four years from racial reasons, mostly in Baračka, Hungary. From July to December 1945, he worked at the 2nd Internal Clinic in Bratislava as a senior house physician. On December 1, 1945 he joined the Department of Internal Medicine of Professor Pór, later in 1948 Internal Clinic at the State Hospital in Košice. Eduard Neubauer was appointed assistant professor on January 1950. After qualifying in internal medicine in 1948 he began intensively to deal with kidney diseases, as the first nephrologist not only in Košice but also in Slovak Republic. He already wrote his first publication in 1946: "Tonsillectomy in chronic glomerulonephritis" [1].

He completed his postgraduate internship at the Nephrological Laboratory of the Faculty of General Medicine in Prague in 1950 and in 1956 and 1957 at the Nephrological Laboratory of the Institute of Blood Circulation Diseases in the Thomayer Hospital in Prague under the leadership of Professor Brod. These stays have led him to the foundation of the Nephrological Laboratory at Internal Clinic of the Faculty Hospital in Košice. This Nephrological Laboratory was fully working in 1954.

Associate Professor Neubauer and his colleagues introduced constantly new laboratory methods for examinations of renal functions, particularly clearance methods [2]. His main scientific interests were: extra- and intracellular electrolyte status in various diseases; hypertension and kidney damage; tubulointerstitial nephropathy; experimental studies

in nephrology. In 1963 he introduced a method of investigating the acid-base balance using the apparatus Van Slyke. He was a very hardworking clinical as well as research worker. On July 1956 he became Associate Professor of internal medicine. He successfully passed attestation of laboratory methods in 1962. Even as the Associate Professor he defended his PhD. thesis in 1964.

Since 1961 until his departure to Canada at the end of 1964, the first author of this article had the opportunity to work with him at the bedside of the patient, in the Nephrological laboratory as well as in the experimental investigations. He was always very diligent, he did not recognize regular working hours and he was tolerant towards colleagues, but also strict to them. He had an extremely good rela-



Figure 1.  
Associate Professor Eduard Neubauer, MD, PhD.

tionship with patients, he was very favourite among them as well as among medical students. Several years before his departure to Canada he suffered from a hearing impairment, caused by toxic damage of the inner ear due to Neomycin.

Associate Professor Neubauer published more than 55 works in domestic and foreign journals until 1965. It was a respectable number at that time. Two publications were created during the cooperation of the first author of this article with him. One of them was: "Electrolyte composition of striated muscle in chronic renal insufficiency after the administration of alkalizing and acidifying substances" [3]. The authors of this study found out that intracellular sodium had increased after administration of 10 g NaHCO<sub>3</sub> in 25 patients suffering from CHRI, but after the administration of ammonium chloride solution 40 mg/kg body weight they did not find significant change in its concentration. Neither alkalizing nor acidification substances have influence on the reduced concentration of extracellular potassium. In the experimental work: „Tissue metabolism in the atrophied dog kidney from the viewpoint of gluconeogenesis in vitro" [4], the authors deal with the gluconeogenesis in the atrophied kidney in 12 dogs under aerobic and anaerobic conditions. They found that under the anaerobic conditions of gluconeogenesis glucose did not form either after the addition of substances such as e.g. pyruvate, lactate or glucoplastic amino acids. Under the aerobic conditions of gluconeogenesis glucose is formed also without the addition of the above mentioned substances, but much less than in a healthy kidney. These findings gave evidence for impairment of gluconeogenesis in atrophied kidney tissue.

Neubauer was also interested in the diagnostics and treatment of chronic pyelonephritis and hypertension and their effects on renal function. He concluded that hypertension significantly damaged kidneys. He recommended for each hypertensive pa-

tient to investigate renal functions, which were in the fifties of the last century relatively simple and imperfect, but were very important for the detection of kidney damage and the following treatment [5] [6]. In addition he published several papers from cardiology, endocrinology, mostly together with other authors from the Faculty Hospital in Kosice, but always from the point of view of the kidney function.

Neubauer was married to Helen Winter. Their marriage was childless. His wife's brother Pavel Mráz, lived in Toronto, Canada. At the end of 1964 they went to visit him and they have never returned back to Czechoslovakia. In connection with damage of his inner ear, which continued even after his emigration, he was handicapped as a clinician, despite of this fact he worked as an internist at a Psychiatric Hospital in Brockton.

Then, since January 1965 the Nephrological Laboratory at Internal Medical Clinic was under the leadership of Miroslav Mydlík, MD. Since 1969 Nephrological Laboratory at the Ist Internal, later IVth Internal and Nephrological Clinic was led by Dipl. Ing. Katarina Derzsiová until March 31, 2008, when it was cancelled as a result of privatization.

Associate Professor Neubauer remained our model as a clinical scientist till nowadays. He laid the foundations of nephrology in Košice and developed it at the level of that time. We, as his followers, have developed this unit within internal medicine and the Nephrological and Dialysis Department in Kosice has become one of the most important in the Slovak Republic. This resulted in formation of the Nephrological Clinic at the University Hospital of L. Pasteur and Medical School of P. J. Šafárik University in Košice 1997, the only one in the Slovak Republic [7], but privatization played again a negative role and the Clinic was cancelled in 2008. Associate Professor Eduard Neubauer, MD, PhD, after retirement lived in Ottawa, where he died in 1983.

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