



Review Paper

Wojciech Rowiński (1935–2014) – a pioneer of Polish transplantology and a mentor

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ABSTRACT

Introduction: The present state of Polish transplantology and nephrology was created to a great extent by prof. Wojciech Rowiński due to his excellent organizational, clinical, and didactic skills. His major field of interest was the pathophysiology of the ischemic damage in donor organs; especially kidneys. Together with his colleagues, he was responsible for the implementation of hypothermic pulsatile perfusion in order to preserve a cadaveric kidney until it could be used in clinical practice. The procedure has been in use since 1995 and has been an extremely important achievement in the reduction of the incidence of posttransplant acute tubular necrosis.

Aim: The purpose of our work is to introduce the reader to the person of Wojciech Rowiński.

Material and methods: The work is based on the available literature. The search process resulted in the detection of relevant articles using valid keywords on electronic databases, including Embase, PubMed, Scopus, Web of Science, and Cochrane Library. Subsequently, 11 were identified as eligible for our review.

Results and discussion: In 2008, due to Rowiński's initiative, the Parliament of the Republic of Poland accepted a resolution regarding the approval of transplantation as a method of treatment.

Conclusions: Rowiński's pioneering efforts and innovative techniques in transplantology had a profound impact on the field, leading to improved organ preservation, reduced complications, and enhanced ethical considerations.

1. INTRODUCTION

Wojciech Rowiński was born on the 11th of December 1935 in Warsaw, Poland. He was the son of prof. Ksawery Rowiński, who implemented many original diagnostic and therapeutic techniques such as lateral CT scans in children, as well as the first angiocardiographic examination. His mother was a teacher of mathematics in one of the lower secondary schools in Warsaw. After the Second World War Wojciech Rowiński's parents separated, and he was brought up by his mother, grandmother, and Mrs. Maria Kościńska who helped with the housekeeping. Wojciech Rowiński attended Secondary School number 14 in Warsaw, where he obtained a diploma as the leader of science and social work twice. This diploma was equivalent to being awarded a place at university without examination. He graduated secondary school in 1952. He explained his choice of studying Medicine as being a coincidence rather than following in his father's footsteps. He was studying at the Medical University in Warsaw and he belonged to the Scientific Circle of Surgeons. The atmosphere at his home was full of medical discussions since he and his sister were studying medicine. Their mother had been constantly repeating that there was 'no money in medicine,' meaning that private medical practice should be secondary. They always kept these words in mind. Therefore, when Rowiński graduated from Medicine in 1958, he began to work for no monetary compensation in the Haematology Institute earning money at the National Department of Medical Publishers (PZWL); where he worked as an editorial assistant from his 4th year of studies. In the Haematology Institute, he met his first mentor, prof. Andrzej Trojanowski, who taught Rowiński how to approach the patient through examination.

2. AIM

The purpose of our work is to introduce the reader to the person of Wojciech Rowiński.

3. MATERIAL AND METHODS

The work is based on the available literature. The search process resulted in the detection of relevant articles using valid keywords on electronic databases, including Embase, PubMed, Scopus, Web of Science, and Cochrane Library. Subsequently, 11 were identified as eligible for our review.

4. RESULTS AND DISCUSSION

In 1960, Rowiński undertook a one-year residency in surgery in England (Wolverhampton). During this period, he spent nearly all of his time productively in the hospital, where excellent working conditions were provided. After this year of residency, he began to practice medicine under prof. Jan

Nielubowicz in the Surgical Research Laboratory of the Polish Academy of Science, where a transplantation research program was conducted. The group involved in this program included young surgeons, anesthesiologists, immunologists, pathologists, biochemists, and students. Rowiński, along with most of his colleagues, worked in the mornings at the Hospital of the Medical University of Warsaw, and they spent afternoons and evenings performing experiments on animals in the Surgical Research Laboratory. It was common for them to stay awake throughout the night looking after dogs, pigs, rabbits, and rats in the laboratory. Rowiński was able to gain professional experience in transplantology there. Moreover, thanks to prof. Tadeusz Orłowski and dr. John Putnam Merrill, he obtained an excellent opportunity to work with a professional team caring for human patients before and after transplantation surgery, during a one-year scholarship at Peter Bent Brigham Hospital in Boston in 1964. While there, Rowiński acquired clinical experience and skills while he was helping Joseph Murray with the transplantation of kidneys. Wojciech Rowiński himself considered that time to be 'a school of transplantology.'¹ Afterward, he joined the team of prof. Jan Nielubowicz, who had been working on the first renal transplantation in Poland. On the 26th of January, 1966, Rowiński assisted prof. Jan Nielubowicz and prof. Tadeusz Orłowski in the first successful kidney transplantation in Poland. The cadaveric kidney was grafted into a young student who was attending nursing school.² After the first successful procedures, extensive research was conducted to improve grafting techniques. These resulted in a few publications concerning kidney transplantation, including *Technic of Kidney Transplantation*³ and *Surgical Technique of Kidney Transplantation*.⁴ The wish of Rowiński and his colleagues was to make kidney transplantation a standard procedure in Poland; although the existing legal regulations were strict, making it difficult to accomplish.⁵

Rowiński together with the research team studied rejection in various organ transplants including kidney, liver, spleen, and intestine grafts in dogs and rabbits. They evaluated the effects of many different anti-rejection treatments. Rowiński was involved in the production of anti-dog, anti-rat, and anti-human anti-lymphocyte sera as well as purified globulins in horses, goats, and rabbits. First, Rowiński with his colleagues investigated the effects of long-term administration of horse anti-lymphocyte serum⁶ and horse anti-dog lymphocyte globulin⁷ in healthy dogs. Subsequently, they examined the influence of dose, route, and time of administration of these reagents on the survival of renal grafts in dogs⁸ as well as on cardiac and skin grafts in rats.⁹ The results indicated that anti-lymphocyte sera from goats and rabbits, after sensitization with lymphocytes obtained from the spleen of dogs or rats undergoing kidney or heart transplantation, are more efficient in terms of graft survival than preparations received from healthy animals.⁵

In the mid-1960s, Rowiński was also engaged in research on pancreatic necrosis and pancreatitis, and he wrote a doctoral thesis on *Acute Hemorrhagic Pancreatitis after Resection of the Stomach* in 1966.

The next significant field of interest for Rowiński was the pathophysiology of the ischemic damage to donor organs. Rowiński, with his colleagues, revealed that the most effective drug protecting the kidney from ischemic injury is lidocaine chloride. This drug heals the injury done to dog kidneys after exposure to 90 minutes of warm ischemia. Shortly after that, the lidocaine pretreatment of the organ and the long-term administration of dopamine in low doses (after revascularization of the kidney) became the standard protocol in their clinical kidney transplantation program.^{5,10}

Wojciech Rowiński was the head of the Ward of General Surgery in the Clinical Hospital at the Medical University in Warsaw from 1980. The team of surgeons working there was involved in many various emergencies and planned surgical procedures. Simultaneously, kidney transplantations from cadavers were started in 1983 at this hospital. In 1986, after Rowiński obtained a postdoctoral degree (*Experimental Research Regarding Kidney Preservation from Cadavers and Prevention of Acute Renal Failure after Transplantation*), the Ward of General Surgery was changed into the Ward of Surgery and Transplantation; which was included in the Institute of Surgery. In this clinic, many transplantations of the kidney, liver, and pancreas were performed.¹¹ An important achievement by Rowiński and his colleagues was the implementation of the hypothermic pulsatile perfusion to preserve cadaveric kidneys, which has been in clinical practice since 1995. This procedure contributed to the reduction of the incidence of posttransplant acute tubular necrosis.⁵ In 1997, the Clinic of Surgery was incorporated into the Institute of Transplantation of the Medical University. Subsequently, in 2005 the Clinic of Surgery was changed into the Department and Clinic of General and Transplantation Surgery with prof. Rowiński becoming head of the department.

During the times of the Iron Curtain, he also managed to obtain funds for the development and expansion of this department. It was thanks to prof. Rowiński at the Hospital on Lindleya Street that apart from the kidneys, pancreas and livers were also transplanted. At that moment, it was the only place in Poland where three organs were transplanted. It was not an easy task because at that time there was no commission to decide on the death of the brain. At that point, even some medical students were against transplants. That is why the Poltransplant was also established. Professor Rowiński also contributed to the creation of studies for transplantation coordinators, as well as to the creation of transplantationology classes for students. All this to increase the awareness and level of knowledge about this new field of medicine.

Medical ethics was always a field of interest for Rowiński, especially when it concerned the doctor-patient relationship and other moral dilemmas connected with the work of a physician.¹ Rowiński was aware that transplant professionals have a double responsibility since they must consider the rights of both the organ recipient as well as the donor.¹² Furthermore, transplantation medicine is one of the medical specialties that are related to many difficult ethical issues. Those issues include the availability of the treatment and its economic aspects, cadaveric organ procurement, the alloca-

tion of available organs, and the transplantation of organs from living donors.¹³ Rowiński was actively involved in all of these disputes. He was a member of the Ethics Committee in the Transplantation Society, and he was an author of many articles regarding ethical concerns in transplantology. Rowiński was not afraid to consider some significant questions such as: Is the removal of an organ from a healthy human being in order to save another human being consistent with the principle of *primum non nocere* – the basic ethical rule rooted in medicine from the beginning? Or would it be ethically justified not to take organs from a young healthy donor who has died in an accident to save six other lives because the family objected to gathering the organs?¹³

The development of transplantation medicine has depended on many factors such as better cooperation between local hospitals and transplantation centers, as well as additional support from the health authorities. From the beginning, Wojciech Rowiński participated in the formation of the Transplantation Act. In cooperation with several transplantology professionals, he sought financial and institutional support for transplantation medicine from the government. In 2008, due to Rowiński's initiative, the Parliament of the Republic of Poland accepted a resolution regarding the approval of transplantation as a method of treatment. Subsequently, in 2010 Rowiński was an initiator of the adoption of The National Programme for Development of Transplantation Medicine, which is a governmental project concerning the financial support of Transplantation in Poland. Furthermore, Rowiński was deeply involved in his program The Partnership for Transplantation. The main aim of this program was to increase the procurement of cadaveric organs through engagement with local authorities, Medical Universities and the Regional Medical Chamber, as well as hospital coordinators of transplantation. It required numerous meetings, lectures, and training to increase the intellectual potential and involvement in organ procurement at local hospitals. Rowiński was the originator of postgraduate studies for transplantation coordinators at the Medical University of Warsaw.

Wojciech Rowiński had significant input into the popularization of the idea of transplantology. In spite of the great progress in this field of medicine and the long history of organ transplantation, Rowiński was convinced of the strong need to increase public awareness. He promoted living donations, such as the transplantation of a kidney or part of a liver among relatives due to the improved results of such transplantations, when compared to donations from cadavers. Therefore, he greatly appreciated the human act of altruism in donating organs or bone marrow. The anonymous donation of bone marrow was close to Rowiński's heart. He had a personal perspective concerning this since he was a recipient of bone marrow and owed his life to such an anonymous donor. Rowiński thanked the anonymous donor through the organization for transplantation and encouraged other recipients to thank donors or their families for saving lives and promoting health.

It should be stressed that professor Rowiński was an excellent academic teacher for medicine, dentistry and nursing students at the Medical University of Warsaw and the University

of Warmia and Mazury in Olsztyn. He was also a visiting professor in the United States of America. According to his students, prof. Rowiński not only taught them medicine, surgery, and transplantology; but also displayed a proper attitude toward patients with diligence, honesty, and kindness. Certainly, he was an example for future and present doctors to follow.

Professor Wojciech Rowiński had a great deal of knowledge and a talent for imparting it. The Surgical Circle led by the Professor included, among others, dr. Beata Łagiewska, prof. Roman Danielewicz (former President of the Polish Transplantation Society), dr. Rafał Taczanowski, dr. Leszek Adadyński, dr. Grzegorz Nawrocki, prof. Zbigniew Wierzbicki, prof. Andrzej Chmura (already as an assistant), dr. Alicja Orkiszewska, dr. Andrzej Kobryń. Later, dr. Kobryń together with prof. Rowiński founded the Transplantology Department in Olsztyn. As part of the Research Club, students met in a small, cramped room, listening for a few hours as Professor Rowiński talked about surgery, techniques, and complications and introduced young adepts of medical art to a fairly fresh topic, which was transplantology at that time. Thanks to this, students also had the opportunity to be on duty, learn the basics of surgery, supervise transplant patients, and assist in complex operations. Then some of the people from the circle were employed in the clinic. Students also remember the science camps they traveled to with the Professor. In many of them, he also instilled a passion for transferring knowledge, thanks to which Poland gained great lecturers, and thus good doctors. Doctors also knew that they could call the Professor for advice at any time of the day or night. Even during the days off from work at the hospital, he devoted his time to training and assisting young surgeons. He used to ask the doctors on duty for a phone call at 10 p.m. to discuss if everything was okay. It also happened many times that during the operation, young surgeons called the Professor and sometimes one word, one hint was enough and the doctors already knew how to approach the surgical challenge that lay before them. It gave them a great sense of comfort and security, they knew that when something was happening, they could always call the Professor and he would always help.

Doctors also mention that the Professor was still a teacher and model for them until the end of his days. Even when his health condition did not allow him to work on the spot in the hospital, he helped doctors by phone or e-mail in managing the treatment of patients. The professor also acted for charity and was the founder and chairman of the United for Transplantation Foundation. Currently, the image of Professor Rowiński hangs in front of the door of the Head of the Transplant Department at The Voivodal Specialistic Hospital in Olsztyn. Doctor Leszek Adadyński wanted to extend the tradition in this way, because earlier, during medical briefings, he always sat opposite the Professor.

Wojciech Rowiński was undeniably committed to transplantology. Thus, he was the National Consultant for Clinical Transplantology in the National Organ Procurement Coordinating Center (Poltransplant) for many years. Rowiński was the president of the Polish Union of Transplantation

Medicine and the National Council of Transplantology from 1996 to 2006. In addition, he was a co-founder of the Polish Transplantology Society and was its president from 2007 to 2009. He was also a founder and a member of the Polish Society for Transplantology and an honorable member of the Czech Transplantation Society.

It should be highlighted that owing to his professionalism and numerous international connections, he was a member or president of many international scientific societies such as the International Transplantation Society (ITS), the International Society for Organ Donation and Procurement (ISODP), the International Pancreas and Islet Transplant Association (IPITA), the American Society of Transplant Surgeons (ASTS), the European Society for Organ Transplantation (ESOT), and the European Society for Surgical Research (ESSR). Moreover, Rowiński was a founder of the *Annals of Transplantation* journal and was its editor-in-chief since 2007.

The family life of Wojciech Rowiński was successful and harmonious. He was married to Joanna Matuszkiewicz-Rowińska, a professor of medicine and a leading nephrologist. They had one son, Christopher.

Wojciech Rowiński died on the 14th of March 2014 after a year-long struggle with leukemia. Up until the last days of his life, he was full of hope and remained active in improving the shape of Polish transplantology. Unquestionably, Rowiński was a pioneer of Polish transplantology, was deeply involved in the development of this field of medicine, and devoted his entire life to transplantology. When asked if the future prospects of transplantation medicine, Rowiński liked to quote Albert Einstein: 'Progress requires imagination and knowledge. Imagination without knowledge creates beauty, Knowledge without imagination leads to perfection, [...] But the real product has to be tested by the time.'

Professor Wojciech Rowiński worked at the University of Warmia and Mazury in Olsztyn in the Department of Surgery. After his death on the 26th of June, there was a ceremony, together with the first graduation of medical students from the University of Warmia and Mazury, to dedicate the name of prof. Wojciech Rowiński to the lecture hall. It was the first such ceremony at the Faculty of Medical Sciences and in attendance of not only the colleagues of prof. Rowiński but also his family – his wife, son, and close friend. The ceremony became truly touching when students, who were taught by prof. Rowiński spoke about his excellent ability to transfer his knowledge and skills. Professor Rowiński was able to implant a true desire and curiosity in students. In the lecture hall mentioned, there is a portrait of prof. Rowiński in a place of honor.

6. CONCLUSIONS

- (1) Rowiński's pioneering efforts and innovative techniques in transplantology had a profound impact on the field, leading to improved organ preservation, reduced complications, and enhanced ethical considerations.

(2) Through his advocacy, legislative contributions, and efforts to increase public awareness, Rowiński significantly contributed to the growth and recognition of transplantology in Poland.

Conflict of interest

No potential conflict of interest relevant to this article was reported.

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