



## HISTORICAL ACCOUNT

### Remembering the Cracow School of Neurosurgery and Neuroradiology.

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#### Introduction

Cracow's Schools of Neurosurgery and Neuroradiology had somewhat fused beginnings. There are two special persons that this article will be focused on, that have together recreated these fields of medicine, i.e. Prof. Stanisława Spettowa - the neuro-radiologist and Prof. Adam Kunicki - the neurosurgeon. Talking about these times, one has to remember that just a few brief moments ago, one of the world's worst man-made disasters, the Second World War, has just finished.

#### Prof. Stanisława Spettowa

Stanisława Spettowa (name seen in PubMed) or Spett, née Janczyszyn, was born on 12 February 1902 in Lviv (back then Polish city of Lwów). Her father was Julian Janczyszyn, a shoemaker, and her mother Julia Amałowicz. She matriculated on 10 June 1921 from Zofia Strzałkowska Gymnasium and studied medicine on Jan Kazimierz University in Lwów. She got her medical diploma in 1927 and continued to do voluntary work in a general hospital in Lwów for two years as an intern. From 1929 till 1935 she continued to work there in a central radiology lab. She got married to Karol Spett on 21 April 1930 and had no children. On October 1, 1935, she

became the head of the radiology lab in the University Clinic of Nervous and Mental Disorders led by Jakub Rothfeld and later by Eugeniusz Artwiński. During that time she cooperated with the department of neurosurgery headed by Aleksander Domaszewicz. During the Soviet occupation of Lwów from 1939 to 1941, she worked at the newly established Lviv Medical Institute which was to replace the Jan Kazimierz University. When Nazi Germany took over Lwów, since 1 April 1942 to 15 March 1945 she was head of the radiology lab at the local general hospital and also participated in teaching at the Institute of Roentgenology of Witold Grabowski during the courses started by Germans, namely: "Staatliche Medizinisch-Naturwissenschaft-liche Fachkurse Lemberg", which was later in 1944 transformed into a medical clinic [1].

In April 1945, before the end of World War II, she arrived to Cracow. On 1st of August of the same year, she became the head of the radiology lab at the Neuro-Psychiatric Clinic of Eugeniusz Brzezicki at the Jagiellonian University. In 1950 the Jagiellonian University Medical College was renamed as the Medical Academy and the existing clinic was split into three separate clinics, so she became affiliated with the Neurosurgical Department run by



Figure 1. Prof. Stanisława Spettowa (sitting on the left) and Prof. Adam Kunicki (sitting on the right) with their team of medical doctors. Photograph was taken in 1956 (courtesy Prof. Igor Gościński).

Prof. Adam Kunicki (Figure 1). There she organized a neuroradiology lab and became an assistant professor in 1951. From 1950 till 1954 she was the regional consultant in radiology. In 1954 she became an associate professor and in 1956 she went to Sweden for further academic training. Together with Prof. Kunicki she published interesting articles on brain tumours and continued her works on angiography of the brain with Maria Jedlińska (Figure 2). In 1963 her lab was transformed into the Department of Neuroradiology affiliated with the Clinic of Neurosurgery and after the 1970's reforms, it became part of the

Institute of Neurology. Prof. Spettowa's Neuroradiology Department was the first one and the leading in Poland, with over 7 000 documented and archived cases, training many future specialists. She promoted six assistant professors and six Ph.D. students. In 1967 Prof. Spettowa was awarded with the research prize 1<sup>st</sup> class from the Minister of Health [1].

Prof. Spettowa retired in 1972 but continued to be active in research. She was a member of many scientific societies in her field and an honorary member of the Polish Society of Neurosurgeons. She was a highly decorated



Figure 2. Sitting in the front row (from left to right): Assistant Prof. O. Liszka, Prof. S. Spettowa, Prof. A. Kunicki, Dr M. Jedlińska, Assistant Prof. J. Jedliński. Standing in 2<sup>nd</sup> row (from left to right): Assistant Prof. E. Szwagrzyk, Dr Z. Wicentowicz, Dr A. Maciejek, Dr J. Grabowski, Dr R. Chrzanowski, Dr Z. Kukulska, Dr A. Uhl. Photograph was taken in 1957 (courtesy of Prof. Igor Gościński).

doctor, she received medals from the Polish government namely: Order of Polonia Restituta Fifth Class, the Knight's Cross (*pol. Krzyż Kawalerski Orderu Odrodzenia Polski*) and Gold Cross of Merit (*pol. Złoty Krzyż Zasługi*) in 1954 [1].

Prof. Spettowa passed away on 3 July 1994 in St. Albert Social Welfare Home in Cracow and was buried next to her husband on Rakowicki Cemetery.

### **Prof. Adam Kunicki**

Adam Kunicki was born on 3 July 1903 in Frysztat, in late Zaolzie (an area currently in the Czech Republic which back then was disputed between interwar Poland and Czechoslovakia). When he was a teen, Adam Kunicki took part in the 7 day Polish-Czechoslovak War in 1919. Since 1920 he studied at the Maritime School in Tczew, and upon passing finals in 1922 he resigned from



further education at this school and began studying at the Faculty of Medicine of the Jagiellonian University. He obtained the title of doctor of medicine in 1928. His father, Ryszard, was also a medical doctor. From 1925, he worked as an assistant and later a senior assistant in the Neurology and Psychiatry Clinic of the Jagiellonian University with professor Jan Piltz, then later as an assistant in the neurological ward of the Hospital of the Health Fund in Łódź under professor Władysław Dzierżyński. In 1933 he travelled to train neurosurgery under Thierry de Martel and Clovis Vincent for 6 months, in France. After returning to Łódź in 1934 he performed his first neurosurgical operations. In

1936 he moved to Warsaw and collaborated with Professor Jerzy Choróbski in organizing the Department of Neurosurgery of the University of Warsaw. He worked in Warsaw until 1944. After the Warsaw Uprising he found himself in a transit camp in Pruszków, after leaving it, he practiced as a doctor in Godzianów [2, 3].

In July 1945 he returned to Kraków, initially working at the Merciful Brothers Hospital (Brothers Hospitallers of Saint John of God). He organized a neurosurgical department of the Jagiellonian Neurology and Psychiatric Clinic, which began its activity in February 1946 [2].



Figure 3. A name day celebration by the neurosurgical clinic team - front row (from left to right): Assistant Prof. J. Głowacki, nurse A. Ruman, Prof. A. Kunicki, admin staff L. Gustabowa, lab staff M. Bogdowa, nurse Stachurska. 2<sup>nd</sup> row (from left to right): Dr J. Grabowski, operating assistant M. Błaszczuk, nurse Sadowska, Dr M. Ładzińska, Dr B. Sikorska, Dr Z. Kukulska, Dr A. Stefanicka-Wiechowa. 3<sup>rd</sup> row (from left to right): Dr R. Chrzanowski, Dr A. Uhl, Dr I. Gościński, Dr K. Ładziński. Photograph was taken in 1961 (courtesy of Prof. Igor Gościński).



Two years later, he followed through with a postdoctoral dissertation based on the thesis "Morphological basis for the division of ependymal tumours". Also in 1948, he left for Montreal as a Rockefeller Foundation scholarship holder. In 1951 he was appointed an associate professor, in 1956 he was awarded the title of full professor. In the 1960s he continued to chair the Cracow's Neurosurgical Clinic (Figure 3-4). In 1970 he went to Warsaw, where he became the director of the Centre for Experimental and Clinical Medicine of the Polish Academy of Sciences and the head of the Neurosurgery Complex of the Polish Academy of Sciences.

He was a member of the Polish Academy of Sciences, and the chairman of the Committee of Neurological Sciences of the Polish Academy of Sciences. For his scientific and academic work in medicine, he was decorated, among others, with the Knight's Cross and the Officer's Order of Polonia Restituta, the Gold Cross of Merit (1954) and the Medal of the 10th anniversary of People's Republic of Poland [2].

He retired in 1976, still an active scientist [2]. He died on 19 November 1989 in Warsaw and was buried in the cemetery in Myślenice.



Figure 4. Team of the Neurosurgery Clinic of the Medical Academy in Cracow in 1964. First row from the left: Dr Lechowski, Dr Gruszka, Dr Kunicki, Prof. Kunicki, Assistant Prof. Liszka, Dr Kukulska, Dr Szwagrzyk. Second row from the left: Dr Moroz, Dr Świdorski, Dr Gościński, Dr Czerwiński, Dr Wincentowicz, Dr Uhl. Third row from the left: an intern, Dr Chrzanowski, Dr Ładziński (courtesy of Prof. Igor Gościński).



Figure 5. Sitting in the front row (from left to right): Assistant Prof. Głowacki, Dr Sikorska, Prof. Spettowa, Prof. Kunicki. Standing in 2<sup>nd</sup> row (from left to right): Dr Wientowicz, Assistant Prof. Szwagrzyk, Dr Świdorski, Assistant Prof. Liszka. Photograph was taken in 1957 (courtesy of Prof. Igor Gościński).

### A special professional partnership

Prof. Spettowa and Prof. Kunicki teamed up when they were both around 50 years of age (Figure 5). At that time they developed a common concept of constant exchange of information between the neurosurgical clinic, radiology, neurophysiology and pathology departments, which was used daily, in training and in scientific work, and was continued (Figure 6). Such all-in-one approaches were not very common at that time in Europe.

Furthermore, with poor equipment, the neuroradiology was often troubled by handcrafted projects, e.g. 3-cassette manual changer for angiography, negatoscope, homemade X-ray protection devices. There was not enough foreign currency to buy apparatus and materials such as a seriograph, image intensifier, films or contrast media. Despite these hardships they were able to manage these fields of neurosurgery, neurology and radiology under one roof.



Figure 6. Team of the Neurotraumatology Clinic of the Jagiellonian University Medical College in 1995. From left: Dr M. Krupa, Dr S. Kwiatkowski, Dr M Moskała, Prof. I. Gościński, Assistant Prof. E. Swagrzyk, Dr E. Mądrostkiewicz, Dr W. Traczewski. Second row from the left: Dr J. Polak, Dr J. Cichoński (courtesy of Prof. Igor Gościński).

With such harmonious daily routines, soon the clinic became the reference centre for difficult cases, archiving many of them and providing systematic practical training not only for the its employees, but also doctors on a national level, with exchanges between the academic institutions from Warsaw, Gdańsk and Lublin. Reliability of neuro-radiology reports and quick communication between the departments became the mainstay of everyday work.

With experience came other possibilities and successes. The working group and then the neuroradiology section of the Polish Neurological Society partook in many European Conferences and International Symposia in Neuroradiology. In fact the Polish delegation co-founded the European co-founded the European Society of Neuroradiology in 1969 [4].



Prof. Kunicki was a visionary and fully aware of future developments in this new field of neuroradiology, so during my habilitation colloquium on 13.12.1968 (R. Chrzanowski) he asked me a question:

"What do you think about the possibilities of further development of neuroradiology and especially the earlier diagnosis of brain tumours?"

My answer consisted of the following:

- (i) improvement of the resolution based on X-ray phenomena: detectors instead of films, analysis by a computer;
- (ii) imaging of cerebrovascular barrier damage; isotope technologies and markers;
- (iii) cellular pathophysiology – immunobiological methods marking boundaries of radiological methods.

In fact, most of it is in use nowadays!

## Conclusions

To sum up, Prof. Spettowa and Prof. Kunicki were the fathers of modern approach to fuse neurosurgery and neuroradiology and our great mentors. Concluding this historical article, we need to quote Prof. Kunicki on neuroradiology and neurosurgery (October 1969):

*"This still young field has started to evolve from general radiology at the moment of introduction of contrast studies..."*

*"Neuroradiology and neurosurgery from the very same beginning coupled with a mutual need to develop in parallel and mutually condition their progress."*

*"Many achievements neurosurgery owes to neuroradiology, but what is rarely mentioned is the fact, that a radiologist without close cooperation with a surgeon would not be able to check the validity of his conclusions and improve his art."*

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