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PIONEERS IN NEUROLOGY

Jakub Rothfeld-Rostowski (1884–1971)

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2021 marks the 50th anniversary of the death of Jakub Rothfeld-Rostowski, an eminent neurologist, academic teacher, military doctor and amateur sculptor (Fig. 1) [1, 2]. His experimental studies and clinical observations, made before World War II, contributed to the development of knowledge and differential diagnosis of extrapyramidal syndromes, "gelolepsy" and "orgasmolepsy" [1, 3, 4]. He related the flexion reflex (Balduzzi-Rothfeld sign), described in 1926 by the Italian psychiatrist Ottorino Balduzzi (1897–1964), with the diagnosis of the location of brain tumors [5, 6].

Jakub Rothfeld-Rostowski was born into a Jewish family on February 4, 1884 in Bukachivtsy which belonged to Austro-Hungarian Empire (eastern Poland between the world wars, western Ukraine today). He was the son of Mojżesz Rotfeld and Lea nee Broder. After graduating from gymnasium in Lviv, he studied medicine at the Faculty of Medicine at the University of Lviv [2]. He obtained his doctor's degree in medicine on March 31, 1909. In 1910, he became an assistant in the neurological outpatient clinic headed by Henryk Blumenstok-Halban (1870–1933). Before the outbreak of World War I, he worked in neurological clinics in Vienna and Hamburg. Rothfeld took an active part in neurological conferences–he gave lectures at the Congress of Neurologists in Crakow in 1912, and the following year in Wroclaw and Ghent.

After the outbreak of World War I in 1914, he was called up to the Austrian Army and worked as a neurologist in military hospitals. After the end of hostilities, he returned to clinical and scientific work at the Institute of Physiology at the University of Lviv. He obtained his habilitation in 1919 on the basis of the dissertation "On the influence of the frontal lobe on motor reactions from the vestibular ear organ" [2]. After the restoration of Polish statehood, he joined the Polish Army, where he was promoted to the rank of major in the corps of medical sanitary officers. In 1920, he took part, as a doctor, in the Polish-Soviet War. He went to the army reserve in 1921. From that time, Rothfeld worked in the Department of Neurology of the University of Lviv, established by Blumenstok-Halban as a professor assistant. He became a titular professor of the Faculty of Medicine at the Jan Kazimierz University in Lviv in 1928. From 1933 to 1936, he headed the Clinic of Neurology [1, 2].

Shortly, before the outbreak of World War II, he finished writing a neurology textbook, publication of which was thwarted by the war. In 1939, as a military doctor, he took part in the first stage of World War II. After the defeat of the Polish army in the fight against the Nazi invaders, he managed to flee via Hungary to France, where he worked as a neurologist in a military hospital. In June 1940, after the Third Reich's aggression against France, Rothfeld evacuated to Great Britain. From 1941, he headed the department of neurology in a military hospital in Scotland. Then, he changed his name to Rostowski [2].

He was a member of the Health Committee at the Ministry of Labor and Social Welfare of the Polish Government in London. He was a professor of neurology (from March 1941) and the Dean (1946–1949) of the Polish School of Medicine at the University of Edinburgh. Rothfeld-Rostowski did not return to Poland after World War II. In 1949–54, he worked as a consultant in the Department of Psychiatry of the Royal Edinburgh Hospital [1, 2]. In 1966, Rothfeld-Rostowski received an honorary degree of Doctor of Laws (LL.D.) of Alma Mater Edinburgensis.

In the post-war period, he started carving. His works have been exhibited in Edinburgh and London. His sculpture "Their last Prayer at Belsen Camp" referring to the suffering of prisoners of the German Nazi concentration camps, was exhibited at the Royal Scottish Academy [1]. His wife

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Fig. 1 Jakub Rothfeld-Rostowski (1884–1971) as the Dean of the Polish School of Medicine (1946–1949). The photo from: Tomaszewski W. (1983) The Polish School of Medicine at the University of Edinburgh: An album. W. Tomaszewski, Edinburgh

was Franciszka nee Raff (1884–1963), a dentist. Their only son, Roman Rostowski (1917–1975), a lawyer, worked in the British Foreign Office [2]. Rothfeld-Rostowski's grandson is the former Minister of Finance (2007–2013) and Deputy Prime Minister (2013) of the Republic of Poland—Jan Antony Vincent-Rostowski. Rothfeld-Rostowski died on July 5, 1971 in London.

Jakub Rothfeld-Rostowski was the author of many experimental and clinical works, including case studies in the field of nervous system diseases. In the years 1912–1923, he published experimental papers on labyrinthine reactions and the pathogenesis of multiple sclerosis [1]. Later, using numerous observations made in clinical settings, he published papers on differential diagnosis of extrapyramidal syndromes [7]. He introduced the term of gelolepsy ("gelastic epilepsy") into neurology [3]. Previously, the terms "gelosyncopy" and "geloplegia" were used by Hermann Oppenheim (1858–1919) to describe patients in whom laughter precipitated loss of consciousness or postural tone [8]. Among Rothfeld's significant contributions in the field of neurological diagnostics, attention should also be paid to the introduction of the term "orgasmolepsy" as a cataplexy concomitant to orgasm [3, 4].

Rothfeld-Rostowski related the flexion reflex described in 1926 by the Italian psychiatrist Ottorino Balduzzi with the possibility of diagnosing the location of vascular foci or tumors in the brain [5]. Balduzzi noted that the vibration set up by a tap on the sole of the foot causing adduction and inward rotation of the contrlateral leg got worse in cases of pyramidal tract disease [5, 9]. Rothfeld presented the results of the analysis of 56 cases of brain tumors or stroke lesions of various locations. He found that foci located in the front of the frontal lobes provoke a flexion reflex on the opposite lower limb. He showed that the anatomical boundary between the contralateral flexion reflex from the frontal lobe and the lateral flexion reflex from the posterior part of frontal lobe is formed by the genu of the corpus callosum. He also found that in tumors confined to the temporal lobes, the flexion reflex is negative [6]. This reflex was mentioned in the neurological literature in the 1930s as the Balduzzi-Rothfeld sign [10]. Nowadays, it is mentioned as Balduzzi sign in handbooks of clinical neurology [9].

Jakub Rothfeld-Rostowski was one of the pioneers of neurology in the interwar period. His case studies were important for the development of neurological diagnostics of brain tumors. He was an excellent academic teacher who perceived the special meaning of neurological diagnostics.

Compliance with ethical standards

Conflicts of interest On behalf of all authors, the corresponding author states that there is no conflict of interest.

References

1. Demianowska M, Falkiewiczowa S, Stein W, Teppa S (1973) Professor Jakub Rotfeld-Rostowski. Neurol Neurochir Pol 7:140–142
2. Terlecki R (1989/1991) Rothfeld Jakub (1884–1971). In: Markiewicz H, Rostworowski E (eds) The Polish Biographical Dictionary (PSB). Zakład Narodowy im. Ossolińskich—Wydawnictwo Polskiej Akademii Nauk, Warszawa-Kraków, vol 32: 303–305.
3. Rothfeld J (1928) Affektiver Tonus- und Bewußtseinsverlust beim Lachen und Orgasmus (Gelo- und Orgasmolepsia). Zeitschrift für die gesamte Neurologie und Psychiatrie 115:516–530
4. Rothfeld J (1932) Über Orgasmolepsie und über sexuelle Erregungen bei narkoleptischen Schlafznständen, nebst Bemerkungen zur Narkolepsiefrage. Zeitschrift für die gesamte Neurologie und Psychiatrie 138:704–719
5. Balduzzi O (1926) A new reflex of the contralateral adductor muscles. Rev Neurol (Paris) 2:243–246
6. Rothfeld J (1934) Le réflexe de flexion et le mécanisme central de son apparition. Rev Neurol (Paris) 1:268–270
7. Rothfeld J (1928) Der Zwang zur Bewegung ein striäres Symptom. Zugleich ein Beitrag zur Differentialdiagnose zwischen Hysterie und extrapyramidaler Erkrankung. Zeitschrift für die gesamte Neurologie und Psychiatrie 114:281–292
8. Gumpert J, Hansotia P, Upton A (1970) Gelastic epilepsy. J Neurol Neurosurg Psychiatry 33:479–483
9. Pryse-Phillips W (2009) Companion to clinical neurology, 3rd edn. Oxford University Press, New York, p 92
10. Sterling W, Orliński M (1934) Tumeur du corps calleux avec troubles psychiques et avec signe bilateral de Balduzzi-Rothfeld. Rev Neurol (Paris) 2:150–151