

FRANCISZEK ANTONI BRANDT:  
LEKARZ I ANATOM

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PHYSICIAN AND ANATOMIST

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### STRESZCZENIE

Franciszek Antoni Brandt urodził się w Warszawie w 1777 r. W młodości najpierw był pomocnikiem cyrulika, a następnie rozpoczął naukę w Szkole Chirurgów w Warszawie. Żyjący w biedzie i doświadczony przez los, Franciszek Brandt zwrócił na siebie uwagę zarządu Szkoły Chirurgów, skąd niespodziewanie otrzymał pomoc. Po uzyskaniu podstawowego wykształcenia medycznego, Brandt wyruszył do Berlina, aby rozpocząć studia medyczne. W 1804 r. uzyskał stopień doktora w zakresie nauk medycznych na wydziale lekarskim w Halle. Następnie wrócił do Polski i w 1805 r. rozpoczął pracę w Klinice Położnictwa w Warszawie, na stanowisku profesora. Brandt brał czynny udział w życiu medycznym. Współuczestniczył w tworzeniu i organizacji Wydziału Lekarskiego Uniwersytetu Warszawskiego, gdzie w latach 1809–1819 wykładał anatomię człowieka. W jego dorobku naukowym znajduje się pierwszy, czterotomowy podręcznik anatomii człowieka w języku polskim. W tym podręczniku Brandt używał mian anatomicznych, stosowanych i zgodnych z dzisiejszą terminologią anatomiczną, choć czasem brzmiących nieco odmiennie niż obecnie.

Brandt używał także licznych eponimów, które były powszechnie znane i stosowane przez ówczesnych anatomów. W swojej pracy Franciszek Brandt szczegółowo i w sposób zrozumiały przedstawił rozwój i czynność poszczególnych narządów.

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### ABSTRACT

Franciszek Antoni Brandt was born in Warsaw in 1777. In his youth, initially he worked as a barber surgeon's assistant and then became a student of the School of Surgeons in Warsaw. Having bitter experience in life and living in poverty, he received unexpected help from the Board of the School of Surgeons in Warsaw. Having obtained primary medical education, he departed to Berlin to undertake medical studies. In 1804 he was conferred the degree of Doctor of Medical Science at the Faculty of Medicine in Halle. In 1805, he returned to Warsaw where he was employed as professor in the Obstetric Hospital. Active in the medical circles, he participated in the creation of the Faculty of Medicine at the University of Warsaw, where he taught anatomy within the years 1809–1819. His scientific legacy consists of his four-volume textbook of anatomy, the first book of that type in Polish. Though the anatomical terminology used by Brandt was atypical compared to modern standards, these names were appropriate for his day. Numerous eponyms used by Brandt were widely known by anatomists contemporary to him. In this work, he detailed the knowledge on the development and function of individual organs, presenting it in a modern and accessible form.

**Słowa kluczowe:** Brandt, lekarz, anatom, biografia, historia medycyny, podręcznik anatomii.

**Key words:** Brandt, physician, anatomist, biography, history of medicine, anatomy textbook.

Franciszek Antoni Brandt (Fig. 1) was born in Warsaw on the 27<sup>th</sup> of March, 1777 to a middle-class family. His parents, Jan and Katarzyna from Gielhauzens, possessed a tenement-house in Warsaw in Nowy Świat Street. Soon after his birth, his mother developed a mental disorder and was confined to an asylum. His father died in 1785, leaving the 8-year-old boy under the care of strangers who were to look after the child and the property left behind. The baby-sitter ignored the boy and squandered the property away [11, 12].

Brandt was sent to a 4-class general school and then to barber surgeon's training (it was then craftsman's occupation) which was run by Piotrowski [9, 11, 12]. Fortunately for the young student, the School of Surgeons was established in 1794 and attendance was obligatory. It seems that the studious and talented student attracted the attention of the manager of the School of Surgeons in Warsaw, Frederic Spaeth. After the collapse of the Kościuszko Uprising and the closing of the School of Surgeons, Brandt was without regular work and money in Warsaw and Płock, leading a day-to-day life. With the help of Spaeth, he received a scholarship from the Prussian government and from 1799 to 1802, he studied medicine in Berlin. He received a doctorate degree in 1804 in Halle and professorship in the Obstetric Hospital in Warsaw in 1805. Brandt was then 28-years old, but one should keep in mind that in the entire city of Warsaw, with a population of 120.000, there were only 46 qualified doctors, apart from military doctors [12, 14]. Therefore, every educated man had a remarkably quick career com-

pared to modern times. Education, on the other hand, was much more difficult as there were no medical schools in Warsaw at that time. The School of Surgeons, after several years of existence, was shut down after the failure of the Kościuszko Uprising [7, 14]. In 1809, in the period of great enthusiasm following the establishment of the Warsaw Princedom, Brandt participated in creating the Faculty of Medicine at the University of Warsaw. On November 7, 1816 Tsar Alexander I officially permitted the activities of the University. Count Stanisław Potocki, Minister of Public Enlightenment, made considerable contributions to the establishment of the University of Warsaw [7]. During the years 1809–1819, Brandt lectured on human anatomy together with Karol Weiss, doctor of medicine, a dissector at the time [1, 2, 7]. Brandt lectured 4 hours per week, including lectures at the Faculty of Forensic Medicine [7].



Fig. 1. Franciszek Antoni Brandt.

A very active member of scientific and medical circles, Brandt was the vice-chairman of the Warsaw Medical Society from 1824 to 1830 [11, 12]. Later, in his active medical career, he ran his private medical practice. In 1837, he fought cholera epidemics and, as Peszke wrote, died on the 21<sup>st</sup> of September “of apoplexy”, suddenly and probably as a result of stress and exhaustion; however, the tendency for sudden deaths was well established in his family. Not only did his father die at a young age, but also his son, who was a young doctor, and died at the age of 34 [12]. Both of them are buried in the Cemetery of Powązki in Warsaw.

Brandt was author or co-author of several publications, among them the work dedicated to post-partum fever, entitled: “The main recommendations for prophylactic of hospital fever known as *typhus bedchamber*”, published in Warsaw in 1830. His main work was a 4-volume textbook of anatomy, edited in 1810–1816 (Fig. 2) [3, 4, 5, 6]. The textbook of Antoni Franciszek Brandt was designed to be a complete textbook, beginning with osteology and ending with angiology. As there was no access to the 1<sup>st</sup> volume, we have used the description presented by Majer and Skobel [10] and we have also analysed the osteological terms contained within the remaining three volumes. This has provided us with sufficient data regarding the value of that textbook and the anatomical nomenclature used by Brandt [8].



Fig. 2. Title pages of Brandt’s textbook with his own signature (two on the right side of the figure).

The author, Brandt, in the introduction to his work stresses that he had faced considerable nomenclature problems, which he hardly overcame. It is worth mentioning that his textbook was largely influenced by the work of German authors, but only in the volume dedicated to angiology does Brandt mention Hildebrand, whose textbook he simply translated. [8]

Anatomical terms used by Brandt are, to some extent, old fashioned and outdated; however, most of them are still in use. Among the osteological terms, most are comprehensible, for example, he used “kość sprychowa” (Polish) – “spoke bone” (English) to name the radius, which would be unclear to readers today. “Kolumna

pacierzowa” (Polish) – “chaplets column” (English) is an obsolete term used for the vertebral column. Some terms are used in a descriptive form, for instance: “wyrostek wielki kości siedzenia” (Polish), “great process of the buttock bone” (English) which is simply the ischial tuberosity.

In the volume on angiology, dedicated to count Stanisław Kostka Potocki, Minister of Religion and Public Education, Brandt described arteries of the human body, their topography, ramifications and most frequent variations. This part of the textbook has 299 pages and is very detailed. Anatomical variants are, according to Brandt, “the less frequent the more important” which is, of course, true and confirms his thorough knowledge of anatomy. In the introduction to this volume, the author described general angiology, structure of the arteries, scheme of branching, and content of the blood and lymph. He introduced terms like: arterial network, vascular plexus, vascular anastomoses and vascular territories. Unfortunately, almost all the terms used in the angiology volume are in Latin rather than in Polish. Among the Polish terms there are: “żyła podkluczykowa” (sub-key vein) for subclavian artery, “żyła fórtowa” (gate vein) for portal vein. It is simply a translation of the Latin word subclavian (Latin: *clavicula*, Polish: *kluczyk*, English: *key*). The third Polish term used in this volume is the word “karotydy” (common carotid artery).

Brandt was not always consistent as regards his nomenclature. In the anatomical descriptions he provided substantial functional comments, divided the circulatory system into a great and small part (great and small circulation or systemic and pulmonary circulation). He named lymphatic vessels “sucking veins”, “milk veins” (*vasa chyliifera*) or “veins with nutrition liquid”. Lymphatic nodes were named “lymphatic glandules” and “canal of the nutrition liquid” was used for the thoracic duct.

The volume on splanchnology was dedicated to Duke Adam Czartoryski, the Head of Vilnius University (Lithuania). In this volume, of 300 pages of text, he described the cranial cavity, thoracic cavity, abdomen and pelvis and included the organs. Polish nomenclature was used only a few times, Latin being preferred. Encephalon was described very briefly and only the main structures were singled out for detailed descriptions. Among these were: cerebral lobes, cerebral hemispheres, cerebral ventricles, cerebral meninges, and grey and white matter. The cerebral dura mater he named the “hard cerebral membrane” (Polish: “*blona mózgu twarda*”). The term “great brain” was used for the cerebrum, and the term “general mass of the brain” described what is now called the “encephalon”. There is no clear distinction between the facial and the vestibulo-cochlear nerves. He named the facial nerve: “*nervus durus sive communicans faciei*” and the vestibulo-cochlear: “*nervus acusticus sive mollis*”.

The volume on myology included 158 pages of text and additional 20 pages of index, and an alphabetical list of all the muscles according to their Latin names. It is notable that almost all muscles have their own Polish terms. Anatomical descrip-

tions of the muscles were almost the same as currently and very thorough; however, descriptions of cervical and back muscles were sometimes imprecise.

The works of Professor Brandt have been classified as: "A textbook without significant value" or, "Of historical value only" [13]. These are pejorative statements, indicating that his works lack any contemporary or important content. However, in our opinion, this is not true. Though the anatomical terminology used by Brandt is atypical compared to modern standards, these names were appropriate for his day. For example, it was typical of such nomenclature to apply eponyms and descriptive terms. However, his anatomical descriptions were very thorough and correct. Numerous eponyms used by Brandt were widely known by anatomists contemporary to him.

## REFERENCES

1. Adamowicz A.: *Krótki rys początków i postępu anatomii w Polsce i Litwie*. Nakł. i druk J. Zawadzki, Wilno 1855.
2. Bilikiewicz T.: *Rys historii anatomii*. In: *Anatomia człowieka*. (ed.) Bochenek A., Reicher M. Wyd. Lek. PZWL, Warszawa 1952.
3. Brandt F.: *Angiologia czyli nauka o naczyniach krwionośnych i limfatycznych*. Nakł. autora, Drukarnia W. Dąbrowskiego, Warszawa 1816.
4. Brandt F.: *Nauka o muszkułach dla uczniów trudniących się rozczłonkowaniem praktycznym na Teatrze Anatomicznym Warszawskim*. Translated from German into Polish by Franciszka Brandta professor of anatomy. Warszawa 1810.
5. Brandt F.: *Osteologia i Syndesmologia*. Warszawa 1814.
6. Brandt F.: *Splanchnologia*. Drukarnia W. Dąbrowskiego, Warszawa 1815.
7. Gąsiorowski L.: *Zbiór wiadomości do historii sztuki lekarskiej w Polsce*. Poznań 1854: 52–57.
8. Gielecki J., Zurada A., Osman N.: *Terminologia anatomica in the past and the future from perspective of 110<sup>th</sup> anniversary of Polish Anatomical Terminology*. *Folia Morphol.*, 2008; 67: 87–97.
9. Helbich A.: *Wiadomość o życiu Brandta*. Pamiętniki Towarzystwa Lekarskiego Warszawskiego. 1930; 1: 513–526.
10. Majer J., Skobel F.: *Słownik anatomiczno-fizjologiczny*. St. Gieszkowski, Kraków 1838.
11. Peszke J.: *Franciszek Antoni Brandt*. In: *Albumy biograficzne zasłużonych Polaków i Polek*. Nakł. Marii Chelmońskiej. Warszawa 1901: 81–84.
12. Szenic S.: *Cmentarz Powązkowski*. PIW, Warszawa 1979: 281–282.
13. Szukiewiczówna H.: *Rys dziejów podręcznikowej literatury anatomicznej w Polsce*. *Now. Lek.*, 1947; 3–4: 61–67.
14. Zahorski A.: *Historia Warszawy*. PWN, Warszawa 1972.