



Felix Platter and a historical perspective of the meningioma



Shyamal C. Bir, Tanmoy Kumar Maiti, Papireddy Bollam, Anil Nanda*

Department of Neurosurgery, LSU Health-Shreveport, 1501 Kings Highway, Shreveport 71130-3932, USA

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ABSTRACT

Introduction: Felix Platter is one of the pioneer anatomists and physicians of the 16th century who described various human diseases including meningioma. In this historical article, we present the details of Platter's life and his pioneering work on meningioma.

First case of Meningioma: In 1614, Dr. Platter described the first case of meningioma. He described the tumor as a round, fleshy mass shaped like an acorn and as large as a medium-sized apple, and full of holes. The tumor was covered with its own membrane, had no connection with the matters of the brain, and left behind a cavity after removal. This first clear description of an intracranial tumor is most consistent with encapsulated meningioma. The succeeding scholar, Harvey Cushing, coined the term “meningioma” for this tumor; neurosurgeons today describe the tumor as “parasagittal or falcine meningioma.”

Other contributions: In addition to his contribution to meningioma study, Dr. Platter was also the first to describe Dupuytren's disease, hypertrophy of the thalamus, and the retina as the sensory organ of the eye. He contributed to the germ theory of disease and gave substantial accounts of mental illnesses, gynecological disorders, and certain dermatological conditions.

Publications: Dr. Platter published numerous accounts on various diseases. In 1614 he reported the case of meningioma in the book entitled “*Platerus Observations in Hominis*”. Additionally, Dr. Platter published his work, ‘*Praxeos Medicae*,’ which contains his most important contribution on psychiatry and his classification of psychiatric diseases.

Conclusion: Because of his many contributions to neuroscience, particularly his identification of meningioma, Dr. Platter should be highly credited as a pioneer in the field of neurosurgery.

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1. Introduction

Meningioma is the most common primary intracranial tumor [6]. Almost 100 years ago, Dr. Harvey Cushing coined the term ‘meningioma’ to describe this intracranial tumor [1,4]. However, it was Dr. Platter, a prominent Swiss physician and anatomist, who first described meningioma 400 years ago (in 1614) [10]. Until today, no details were found in the literature about him and his early discovery of meningioma [10]. This article describes the details of Platter's life and his pioneering work on meningioma.

2. Methods

Standard search strategies, including searching terms in the Pubmed/Medline and Cochrane databases did not yield any information on the life and work of Dr. Felix Platter. The historical details about his life and work were collected from archives and

rare books available through the following sources: Portraits of European Neuroscientists (<http://neuroportraits.eu/portrait/felix-platter>), Nigel Phillips (<http://www.nigelphillips.com/>), and Diagnosis, Treatment, and Outcome (available in Google Books).

3. Biography

Dr. Felix Platter (Fig. 1) was born in Sion, Switzerland on 28th October in 1536. He was the son of Thomas Platter, a Swiss humanist scholar and writer. In 1552, despite his family's poverty, Platter moved to Montpellier in southern France to study medicine at 15 years of his age. He lodged in the house of Laurent Catalan, the town pharmacist and the Platter's family friend. Dr. Platter studied medicine under the direct supervision of Dr. Guillaume Rondelet, a renowned anatomist and naturalist in the University of Montpellier. Felix Platter's younger brother, Thomas Platter, later joined Felix to also study medicine in Montpellier [12]. After 5 years of assiduous study, Felix received his MD degree in 1557. Following this, he and his brother traveled around France and part of Germany before returning to Basel to start his practice. He was an archiater and professor of medicine for 54 years. Felix Platter was named the

* Corresponding author. Tel.: +1 318 675 6404; fax: +1 318 675 4457.
E-mail address: ananda@lsuhsc.edu (A. Nanda).



Fig. 1. Portrait of Felix Platter.

Courtesy of Early Modern Medicine (Beautiful Healthy Bodies), Hertfordshire, UK.

dean for several times at the University of Basel. He was a renowned practitioner and was much in demand for consultations. Dr. Felix Platter made a significant contribution during the Plague devastation in Basel and earned recognition and respect from the patients as well as his colleagues [12].

He was also a successful teacher and instructed students who came from all over Europe to attend his lectures. Dr. Platter was the first anatomist of the new Vesalian School in Germany. He was also the first physician in Germany to dissect a human body, and performed hundreds of dissection in his lifetime. In addition to his accomplishments as a physician and scientist, he was also a famous collector of art, musical instrument, stones, minerals, and plants. As a naturalist, he established a botanical garden in Basel which he willed to his students since he fathered no children. At 78 years of age, he died on 28th July 1614 in Basel [12].

4. Description of first case of meningioma by Dr. Platter

Caspar Bonecurtius, one of Dr. Platter's patients, developed a gradually altered mental status. He lost his appetite and was unable to feed himself unless forced, and eventually became comatose. Lastly, he died after 6 months of experiencing these symptoms [1,10,11].

Dr. Platter performed the autopsy of Caspar Bonecurtius and described the tumor as follows:

"A round fleshy tumor, like an acorn. It was hard and full of holes, and as large as a medium-sized apple. It was covered by its own membrane and entwined with veins. However, it was free all of connections of the matters of the brain so much so that when it was removed by hand, it left behind a remarkable cavity" (Fig. 2) [10,11].

Dr. Platter's report of the case of Caspar Bonecurtius is the oldest record of what could be a meningioma in the existing literature. According to Dr. Felix's description, the tumor was on the corpus callosum [10,11]. Based on his description, one could hypothesize that the tumor was either parasagittal or falcine in location. As a result, neurosurgeons today would describe the tumor as a parasagittal or falcine meningioma due to its location and characteristics.

Due to its striking appearance and clinical behavior, meningioma has attracted the attention of neurosurgeons, anatomists, and pathologists. After Dr. Platter reported his case of intracranial tumor in 1614 [11], French surgeon, Antoine Louis, in 1771 published a case series of meningioma entitled "*Fungueuses de la dure-mere*" or "Fungating mass of the dura matter" [9]. In USA, Dr. William Keen successfully resected a case of meningioma in 1887 [3]. In 1863, Dr. Virchow identified the granules in meningioma and named the granular bodies as psammomas (sand-like). Decades later, Dr. Harvey Cushing coined the term "meningioma" in 1922 [4].

5. Other contributions

Ophthalmology (Fig. 2): In addition to neurosurgery, Dr. Platter also had a keen interest in ophthalmology. Platter was the first physician to suggest that the retina rather than the lens was the sensitive part of eye and operated in a purely optical function: "The principal organ of vision, namely the optic nerve, expands through the whole hemisphere of the retina as soon as it enters the eye. This receives and discriminates the form and color of external objects which together with the light enter the eye through the opening of the pupil and are projected on it by the lens." Platter also observed congenital cataracts and was the first to notice that professionals who worked near a fire (e.g. alchemists) could eventually suffer cataracts, or more specifically, glass-workers' cataract, according to modern terminology [8].

Psychiatry: Dr. Platter also provided substantial accounts of mental illnesses. Based on precise clinical and psychopathological observations, he described forced and delusional symptoms, delirium, drunkenness, hypochondria, melancholia, jealousy, and symptoms of dementia. These individual symptoms described by Platter were then grouped into syndromes [5,7].

Pediatrics: Platter was the first to describe the condition of hypertrophy of the thyroid in pediatric patients, as he reported the first known case of infant death from hypertrophy of the thymus [12].

Orhtopaedics: Dupuytren's Contracture (DC) was recognized by Platter in 1614. He proved that subcutaneous ligamentous extensions of the palmar aponeurosis and not the flexor tendons were responsible for DC [2].

Germ theory: Platter was the first proponent of the germ theory of disease [11].

Gynecology and dermatology: He also gave substantial accounts on certain gynecological and dermatological disorders [11].

6. Publications

Platter was a pioneer of the pathologic anatomy and a founder of forensic medicine in the 16th century. Although Dr. Platter's best

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