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The Legacy of Prof. Constantin Arseni. The Medical Architect Behind the Romanian School of Neurosurgery

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Rezumat

Moștenirea Prof. Dr. Constantin Arseni. Arhitectul Școlii Românești de Neurochirurgie

Personalitatea Prof. Dr. Constantin Arseni (1912-1994) este fără îndoială legată strâns de apariția Școlii Românești de neurochirurgie. Acum, la două decenii de la regretata trecere în neființă a Acad. Prof. Dr. Constantin Arseni autorii realizează o trecere în revistă a activității acestuia surprinzând totodată modul în care a evoluat de-a lungul timpului Școala Românească de Neurochirurgie sub grija părintească a ilustrului neurochirurg. Mănat de o tenacitate incredibilă, Acad. Prof. Dr. Constantin Arseni a reușit nu numai să creeze prima clinică de neurochirurgie complet autonomă din România ci și să o ducă la cele mai înalte standarde academice și științifice ale vremii dotând-o cu cele mai noi mijloace tehnice disponibile și construind o bibliotecă pe care orice universitate de medicină din lume ar fi invidioasă. Capodopera Acad. Prof. Dr. Constantin Arseni, cel mai mare spital cu profil neurochirurgical din Europa (la vremea respectivă), fusese conceput să funcționeze ca un institut de cercetare dedicat sistemului nervos central, însă odata cu prabușirea Uniunii Sovietice și căderea cortinei de fier

Europa a fost marcată de reforme iar ideea institutului dedicat creierului a fost abandonată de autorități, iar spitalul care astăzi îi poartă numele (Spitalul Bagdasar-Arseni) s-a metamorfozat într-un centru multidisciplinar dedicat urgențelor neurochirurgicale și traumatice.

Cuvinte cheie: neurochirurgie, Constantin Arseni, Dumitru Bagdasar, Harvey Cushing, istoria medicinei

Abstract

The personality of Prof. Dr. Constantin Arseni (1912-1994) is without any doubt a key point in any discussion regarding the history of the Romanian School of Neurosurgery. Now at two decades since the regretted passing-away of Prof. Arseni the authors present several pieces of data regarding the early beginnings of neurosurgery in Romania and how this discipline has evolved over time in our country. Driven by an incredible tenacity Professor Constantin Arseni managed not only to create the first completely independent clinic of neurosurgery in Romania, but also to keep it continuously updated with the latest bibliographic and technological resources available at the time. Professor Arseni's masterpiece, the largest neurosurgical hospital in Europe (at the time of its construction) was supposed to be a completely autonomous institute dedicated to surgery on the human central nervous system. As the Iron Curtain fell and Europe was marked by continuous reforms, the idea of an institute dedicated to the brain was abandoned by the authorities and a multidisciplinary hospital dedicated to neurosurgical emergencies and trauma was born.

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Introduction

The beginnings of neurosurgery in Romania as an independent specialty are tied directly to the activity of Professor Dumitru Bagdasar (1893-1946), a Romanian Professor of Neurology who adopted and subsequently used the surgical techniques learnt in the clinic of Professor Harvey W. Cushing (1869-1939) in Boston.

After returning to Romania in 1935, Professor Bagdasar manages to get all the clearance needed to open a completely independent neurosurgical unit in one of the buildings of what was then called "The Central Hospital for Nervous Diseases and Endocrinology of Bucharest" (1) - the current National Institute for Neurovascular Disease "Alexandru Obregia" of Bucharest.

The first neurosurgical unit had a capacity of 10 beds and an operating theatre with mediocre equipment. Although it was the first independent neurosurgical unit, from a chronological point of view, the neurosurgical unit in Bucharest was the second one to be born in Romania, as Professor Alexandru Moruzzi (1900-1957) had influenced the local authorities in Iasi the year before (the second largest city of Romania at the time) to create a neurosurgical unit, after having studied neurosurgery under Clovis Vincent in France.

The dedicated personality of Professor Dumitru Bagdasar was acknowledged worldwide as he had been appointed Professor Cushing's honorary assistant. In 1945 Professor Bagdasar is officially appointed Professor of Neurosurgery and in 1946 after his regretted demise he is posthumously appointed a member of the Romanian Academy

The closest collaborator of Professor Bagdasar, who in time proved to be a worthy keeper of the neurosurgical tradition Bagdasar created, was the future Professor Constantin Arseni, (See Fig. 1) an ambitious young doctor who initially approached pathology, then anatomy, then surgery and who finally dedicated all his life to neurosurgery. Having graduated medical school in 1935, Arseni defended his PhD. thesis the next year and since 1936 he became a part of Professor Bagdasar's neurosurgical team. Besides Constantin Arseni, another notable member of the "Golden Neurosurgical Team" from Bucharest was Mrs. Sofia Ionescu - the first woman neurosurgeon in the World (2).

11 years after the opening of the Bucharest neurosurgical unit (See Fig. 2), at the moment of Constantin Arseni's appointment as chief of the neurosurgery, the clinic had 80 beds and it was growing.

The multitude of clinical and laboratory studies developed during Professor Bagdasar's lifetime had led to the birth of the much appraised Treatise of Neurosurgery in 1950. As time passed, the array of pathologies approached in the clinic diversified and the clinic grew rapidly due to Arseni's strenuous



Figure 1. Professor Constantin Arseni at the age of 65

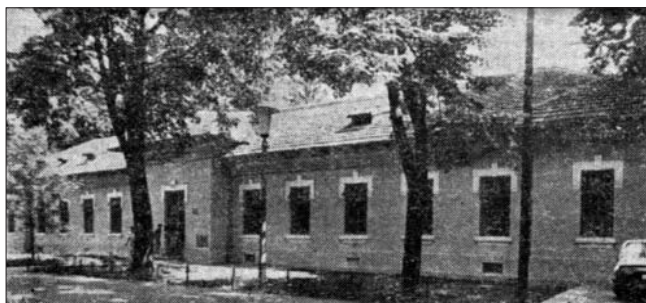


Figure 2. The front of the first neurosurgical unit in Bucharest (1934)



Figure 3. The neurosurgical unit between 1954 and 1975

efforts (3,4). In 1952 Constantin Arseni is appointed Assistant Professor and in 1963 he is appointed Professor of Neurosurgery.

In 1964 the clinic had a capacity of 220 beds split between 2 departments committed to oncological neurosurgery, one department of pediatric neurosurgery, one department of spinal neurosurgery, one department of vascular neurosurgery and one department of trauma neurosurgery. (See Fig. 3).

The clinic now had 7 operating rooms and an intensive care unit. Research was a key activity in the clinic and the laboratories had up-to-date technology (for the time); at the same time the neuroimaging department worked continuously

to improve the existing methods and the standard of care for the patients. (5,6)

The continuous development of the clinic imposed the need for more space, and in 1975 a new building was inaugurated turning the Bucharest clinic of neurosurgery into the largest of its kind in Europe. The initial bed count showed 550 beds, however, the capacity was later extended to 650 beds. (See Fig. 4)

The construction was closely supervised by Prof. Arseni who imagined 7 neurosurgical departments covering the entire range of pathologic entities. There were 13 operating rooms. Over the first few years the clinic also became host to an ENT department and an ophthalmology department. All units had to be equipped with the best equipment possible at the time, so, in 1982 a computed tomography unit was built which immediately improved the possibilities for diagnosis, patient standard of care and follow-up. (7) (See Fig. 5)

It was the personality of Prof. Arseni that stimulated the research activity in the field of neurosurgery. During the period he was chief of neurosurgery countless monographs regarding neurosurgery and connected fields were published. These publications showcased the Romanian experience in the field of neurosurgery. Among these we mention several titles such as: C. Arseni and T. Iacob – Vertebral Sciatica (1948); C. Arseni, I. Petrovici, F. Nash, V. Cunesco – Vascular diseases of the brain and medulla. (1965); C. Arseni, M. David and colab. - Neuro-ophthalmologic diagnosis (1967); C. Arseni, M. Simionescu – Spinal Neurosurgical Pathology (1968); C. Arseni, Al.I. Constantinescu – Intracranial hypertension (1972); C. Arseni, I. Oprea – Traumatic brain injuries (1972); C. Arseni and colab. – Intracranial expansive processes (vol. I, II 1973); C. Arseni, Al. Constantinovici, G. Panoza – Traumatic injuries to the spine and peripheral nerves (1974); C. Arseni, A. Constantinescu, M. Maretsis – Clinical examination in neurosurgery (1977); C. Arseni, M. Carp – The pathology of CNS Tumors (1978); C. Arseni, D. Chimion and colab. – The cerebrospinal fluid (1979); C. Arseni, L. Popovici – Clinical Neurology (1980); C. Arseni, G. Panoza – Pathology of the cervical spine (1982).

The most important work accomplished during Professor Arseni's leadership of the neurosurgical clinic of Bucharest was the Treatise of Neurosurgery, in 5 volumes, which was published between 1979 and 1982. Since the computed tomography unit was inaugurated, new monographs and acclaimed titles were published.

Some titles like C. Arseni, A.V. Ciurea, A. Cristescu, L. Horvath, V. Marinescu – Parasitoses of the CNS (1981); C. Arseni, L. Dănilă, L. Popovici, I. Pascu – Vascular diseases of the brain and medulla (3 vol. 1982-1983); C. Arseni, A.V. Ciurea – Intracranial suppurations (1983); or C. Arseni, Al. Constantinescu – Cerebral metastases (1990) are still considered reference titles in the field of neurosurgery.

Furthermore, Professor Arseni had the vision to create a completely independent department of pediatric neurosurgery and in this respect undertook the task of publishing a number of 3 monographs which approached the topics of neurosurgical diagnosis and the neurosurgical pathology of



Figure 4. The new building of the clinic, built in 1975



Figure 5. The annexed building housing the CT scan



Figure 6. Prof. dr. Constantin Arseni (1912-1994)

infants: Neurosurgical diagnosis in infants. Arseni C. Horvath L. Ciurea AV (1978); Neurosurgical Pathology of Infants and children aged 0-3. Arseni C. Horvath L. Ciurea AV (1979) and Neurosurgical Pathology in Infants. Arseni C. Horvath L. Ciurea AV(1980).

Besides the prodigal research, Professor Arseni dedicated himself to train new specialists in the field of neurosurgery by contributing to the building of a new library in the clinic. The library had about 6000 works in the field of neurology and neurosurgery. (8)

Professor Arseni was chief of neurosurgery until 1990 (See Fig. 6) when Professor Alexandru Constantinovici was

appointed the new chair of neurosurgery.

After Professor Arseni passed away the clinic he imagined suffered heavy modifications being gradually transformed into a multidisciplinary hospital. Besides the existing departments a department of cardiology, general surgery, orthopedics and plastic surgery were incorporated into the existing structure of the hospital. The hospital was then reorganized into 5 departments of neurosurgery with the needed facilities.

Professor Constantin Arseni's neurosurgical clinic represented an academic nucleus upon which other regional centers of neurosurgery were built. Professor Arseni's pupils gradually became Professors in their own and contributed themselves at the progress of neurosurgery in Romania. Currently, in Bucharest alone, besides the clinic Professor Arseni built (and which is named the Bagdasar-Arseni Emergency Hospital in honour of the founding fathers of neurosurgery in Romania) there are 6 other neurosurgical units. Regarding Romania, Professor Arseni's crucial contribution helped build neurosurgical units in all major urban areas and all university centers (Iași, Cluj-Napoca, Târgu Mureș, Timișoara, Constanța, Craiova).

For his entire activity in the field of medicine and neurosurgery, Professor Constantin Arseni was appointed president of the Romanian Academy of Medical Sciences two times, once in 1981 and once in 1990 and became a member of the Romanian Academy in 1991. His entire activity in the field of clinical sciences, surgical techniques and research has undoubtedly influenced greatly the development of neurosurgery in Romania. Professor Arseni understood the importance of neuroscience and research in this evergrowing field. He was the first to use Computed Tomography in neurosurgical investigations and he set great emphasis on the

morphological aspects of the lesions he so carefully treated. His papers, which were translated into several languages, keep being very important reference materials in our beautiful field of neurosurgery.

For his dedicated personality and his timeless legacy the entire country is grateful to Professor Constantin Arseni, a true titan of neurosurgery, just like Cushing, Dandy, Yasargil, Olivecrona and many others.

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