

HOMAGE TO THE FIRST LADY OF INTERNATIONAL NEUROSURGERY: CENTENNIAL CELEBRATION COMMEMORATING THE BIRTH OF DR. SOFIA IONESCU-OGREZEANU

Andreea-Anamaria IDU^{1,6}, Aurel-George MOHAN^{2,3}, Mircea-Vicențiu SĂCELEANU⁴, Alexandru-Vlad CIUREA^{5,6}

¹ MD Emergency University Hospital of Bucharest, Bucharest, Department of Neurosurgery, Romania

² MD, Associate Professor MD, PhD Bihor County Emergency Hospital, Department of Neurosurgery, Oradea, Romania

³ MD, Associate Professor MD, PhD Oradea University – Medical School, Neurosurgical Department

⁴ MD, Neurosurgical Lecturer MD Emergency University Hospital of Sibiu, Department of Neurosurgery, Sibiu, Romania

⁵ MD, Prof. MD, PhD, Msc Sanador Medical Center, Department of Neurosurgery, Bucharest, Romania

⁶ MD, Prof. MD, PhD, Msc “Carol Davila” University of Medicine and Pharmacy, Bucharest, Romania

Corresponding author: Prof. A.V. Ciurea MD., PhD., MSc., Dr. h.c. Mult, E-mail: prof.avciurea@gmail.com

Accepted December 19, 2019

Endearingly known to Romanians as the “Lady of Neurosurgery,” Dr. Sofia Ionescu (b. April 25, 1920 in Fălticeni, Suceava–d. March 21, 2008 in Bucharest) was officially declared the first woman neurosurgeon by the World Federation of Neurological Surgeons in 2005. Performing her first neurosurgical operation in 1944, during World War II, Dr. Ionescu’s prolific 47-year career was characterized by unwavering professional integrity and profound dedication to her patients and craft. Dr. Sofia Ionescu OGREZEANU was part of Romania’s first neurosurgical team, otherwise known as “The Golden Team,” together with Prof. Dr. Dimitrie BAGDASAR, a protégé of Prof. Harvey Cushing, along with doctors Constantin ARSENI and Ionel IONESCU. She performed both cranial and spinal neurosurgery, pioneered several neurosurgical techniques, and published approximately 120 articles in both national and international journals.

The international recognition of her merits took place during the 13th WFNS Congress, in Marrakech 2005, when she was officially nominalized as the first woman in Neurosurgery.

Keywords: Sofia Ionescu (Ogrezeanu), Neurosurgical history, Romanian Neurosurgery, First Woman in Neurosurgery.

INTRODUCTION

“Let us see your hands,” was the first reaction of the French Medical College in 1970 when a woman, Dr. Sofia Ionescu, humbly introduced herself as a neurosurgeon. She was acknowledged by her French peers only upon revealing her “professional epiphysitis”, which was considered the “seal of approval of the first woman neurosurgeon of international renown”, or a characteristic mark possessed by experienced neurosurgeons during that period due to their extensive use of Gouge forceps (or bone-cutting forceps).^{1,2}

EARLY CAREER

Benefitting from a privileged education, Dr. Sofia Gherghina Ionescu-Ogrezeanu cultivated

skills in drawing and as a pianist, receiving awards each year while attending School No. 1 in Fălticeni. Between 1931 and 1937, she attended the Girls’ Secondary School in Fălticeni from first to sixth grade. Later, from 1937 to 1939, she requested to be transferred and completed her last two years of secondary school at the “Marica Brâncoveanu” Central School for Girls in Bucharest. Her physics professor was Ștefania Mărcăineanu, recognized for her research into radioactivity, and who, in May 1931, was the first to successfully create artificial rain.

Between 1939 and 1945, Dr. Ionescu attended the Faculty of Medicine in Bucharest, studying anatomy under Prof. Dr. Rainer Francisc and Associate Prof. Dr. George Palade, the latter whom would become a Nobel Laureate. Pediatrics was taught by Prof. Dr. Alfred Rusescu, and parasitology by Prof. Dr. Zotta, who is credited for eradicating malaria from Romania. Neurology was taught by Prof. Dr. Ionescu Sisesti, otorhino-

laryngology by Prof. Dr. Metianu Nicolae, and histology by Prof. Dr. I. T. Niculescu.³

During medical school, the inaugural neurosurgical rotations were held in the Neurosurgery Service of Hospital no. 9 in Bucharest, where Prof. Dr. D. Bagdasar, the founder of Romanian neurosurgery, discovered Dr. Sofia Ionescu's aptitude for surgery, eventually encouraging her pursue a surgical specialty, remarking, "Miss, you will be an excellent doctor, if you have so much concern for the welfare your patients" – words that would seemingly bless her budding career.⁴

NEUROSURGICAL CAREER

A defining moment in Dr. Ionescu's career, and, indeed, history, came in 1944, during her fifth year in medical school, when she carried out her first neurosurgical intervention, performing a trepanation to save the life of a comatose boy, a casualty of the bombing campaigns of World War II. Thus, at that moment, Dr. Sofia Ionescu became the first woman neurosurgeon in the world.⁵

Over the course of her career, Dr. Ionescu labored ceaselessly, day or night, through two pregnancies, even foregoing maternal leave entirely, without so much as a single day of vacation in 15 years, effectively working on-call, nonstop – essentially residing in the hospital – for seven years, arriving in the neurosurgical ward each day at five o'clock in the morning, sacrificing her personal life in order to ensure the continuation of the neurosurgical branch of medicine in Romania.

"For all of her life, this is what she did: she refused to let anybody wait! And this is what set apart an otherwise ordinary person, an otherwise normal woman like any other, into something else entirely," wrote Rodica Simionescu in her biography dedicated to Dr. Ionescu, entitled, "Restless Good – The Neurosurgeon Dr. Sofia Ionescu."¹

Dr. Sofia Ionescu was part of the first dedicated neurosurgical team in Romania, which came to be known as the *Golden Team*, led by Prof. Dr. Dimitrie Bagdasar, together with doctors Constantin Arseni and Ionel Ionescu (who would later become the husband of Dr. Sofia Ionescu). Prof. Dr. D. Bagdasar was awarded his specialty in the clinic of Professor Harvey Cushing in Boston, and would become the founder of Romanian neurosurgery. In a sense, the Bucharest School of Neurosurgery is a direct descendent of its American counterpart. Following the untimely death of Dr. Bagdasar at

the age of 53 (July 16th, 1946), the *Golden Team* remained with three members.⁶

When the Neurosurgery Service of Central Hospital no. 9 was first established, it had a 40-bed capacity, which later increased to 80, then 150, and finally 220 beds. It was equipped with four operating theaters, and employed a total of 21 neurosurgeons. Patients would later have at their disposal a Traumatology Service, two wards dedicated to cerebral tumor pathologies, one ward for vertebro-medullary surgeries, and one neonatal neurosurgical ward.

In January 1945, Dr. Sofia Ionescu passed her doctoral exam, and was also married in the same year. During the month of February 1946, while pregnant, Dr. Sofia Ionescu took her medical consultant exam. Dr. Sofia Ionescu recalled a moment during delivery when she felt she could hardly breathe due to the large number of medical personnel present. By February 25th, she had given birth. Her grade as senior consultant was confirmed in 1958 after passing another attestation examination. By 1976, she was promoted to a grade II senior consultant neurosurgeon, based on her academic and medical activities, as well as her seniority.⁷

In order to manage the high volume of neurosurgical cases, especially when called to consult patients in other parts of the country, such as Cluj, Constanta, Brasov and Sibiu, Dr. Ionescu would travel by train overnight so as to see patients in the morning, after which she would return to Bucharest by plane, to be able to operate urgent cases had meanwhile arrived during her absence. For a time, Dr. Ionescu would even see patients at Polyclinic no. 3 three times per week, despite her already demanding hospital schedule, which was grueling in itself.⁸

In 1976, the hospital management wrote a memo regarding the exam for medical grade promotion, that a candidate doctor must "contribute to the instruction and training of new doctors, and leave their professional and personal mark on each of them: the ability to rapidly decide the most suitable techniques for each case."

Even after retiring, Dr. Sofia Ionescu continued to publish original works.

RESEARCH

Dr. Sofia Ionescu's scientific activity was presented in the Communications of the Neurological Society in 1947, various conferences throughout

Romania in Timisoara, Buzau, Roman, Iasi, as well as articles published in both domestic and foreign journals, amassing a total of 120 published articles between 1957 and 1987. Dr. Ionescu's proficiency in the field of neurosurgery has been recognized in prestigious international publications, such as, „Acta chirurgica Belgica, 1958- Les osteomes craniens”; „Journal de chirurgie, 1958 – Les compressions medullaires dues a des tumeur sintrarachidiens Etude Clinice Statistique de 362 cas”; „Psychiatria, Neurologia, Neurochirurgia, 1960, Amsterdam”; „Wiener Klinische Wochenschrift, 1962”; „Viata Medicala – vol. XII 1965”; „Journal of Neurosurgery, 1967”; „Rev. D'oto-Neuro-Ophthalmologie, 1969 – Post-traumatic severe nasal hemorrhage produced by a ruptured intracranial carotid artery aneurysm, 2 cases”; „Rev. Roumaine de Neurologie, 1970– Intracranial hypotension as an etiological risk factor in subdural hematomas, after spinal anesthesia during general surgery operations”; „Rev. Roumaine Endocrinologie, 1970”; „Neurochirurgia Stuttgart, 1970 – Spontaneous CSF fistula, transfrontal endonasal approach for fistula closure, which proved to be caused by increased hydrocephalus resulting from a clival meningioma; „Neurologie, Psihiatrie, Neurochirurgie, 1974, vol. XIX”; „Roumanian Neuro-Surgery, 1987, vol. III, V – Significance of pain in lumbar disc herniation.”^{9,10}

Dr. Sofia Ionescu pioneered novel neurosurgical techniques, which were later perfected and reproduced, including: intracerebral hematoma evacuation with the aid of a trocar in 1968, preliminary endoscopic neurosurgical interventions, as well as developing a novel ventriculocisternostomy technique. Furthermore, she aided in the development of a procedure involving the bushing of a fissured carotid artery using a sternocleidomastoid muscle flap, which potentially saved the life of one of her patients, recalling:

“There was one time, when I had a young man on the operating table, who had a blockage between the fluid sacs located in the large brain and small brain. The patient had already entered into a coma. There was no fluid drainage present through the cerebral aqueduct of Sylvius. I was assisting the Professor, who at one point had to leave [the operating theater], saying to me, “Madam, you're on your own!” At that moment an idea came to me. I had read [an article] in a medical journal about a Norwegian who had conceptualized a system of tubes to drain liquid. Just then, a nurse happened to be walking by carrying a tray with a sterile urinary catheter, and I told myself that I

just had to give it a try. In Western Europe, communication is accomplished either with peritoneum or a large vein. I created a groove in the bone, I inserted a tube fashioned from a catheter, and upon attaching it in the large brain superiorly, liquid began to drain, whereas inferiorly, I attached it to the meninges, and the liquid resumed its natural course. That was miraculous. A man who was about to die went on to become a teacher and father children.”¹¹

RECOGNITION

Among the important distinctions Dr. Sofia Ionescu received throughout the years, notable mentions include the Red Cross Badge of Honor in 1943; Insignia Recognizing Medico-Sanitary Service in 1957; Medal observing the 20th year anniversary of Liberation from the fascist yoke; Medal for the proclamation of the Republic (25 years) in 1972; An honorary diploma for exceptional merit from the National Association of Women with University Degrees in Romania received in 1996; selected as Emeritus Member of the Romanian Academy during the General Assembly of the Academy of Medical Sciences in 1996; The “Engineer Elisa Leonida Zamfirescu” prize and honorary diploma awarded by the National Confederation of Women in Romania for outstanding merits in promoting science and technology in Romania; Member of the Romanian Society of Medical History in 1996.¹²

A unique moment during the World Federation of Neurosurgical Society (13th WFNS Congress), in Marakech, June 2005, in the “Women in Neurosurgery” session, **Dr. Sofia Ionescu, Romania, was officially recognized as the first woman in Neurosurgery.**¹³

FAMILY LIFE

Constantin Ogrezeanu, a clerk at the National Bank, lost his 14 years old daughter from his first marriage due to respiratory complications. Following this tragedy, he divorced his wife and withdrew to Falticeni, in order to mourn his loss. The socio-political climate of the time forced Maria Șincai from Negruleasa, Campulung to seek refuge in Fälticeni, ultimately arriving on the doorstep of Mr. Constantin Ogrezeanu. They later married and had two daughters together: Sofia Gherghina (named after her paternal grandmother) and Constanța.

On January 23, 1945, Dr. Ionel Ionescu, senior consultant neurosurgeon on the team led by Prof. Dr. Bagdasar, asks Sofia Ionescu: “Miss, I’m leaving for the front, will you wait for me?” And so, Sofia OGREZEANU would become Mrs. Sofia Ionescu-OGREZEANU.

They had two children together, Constantin (born February 26, 1946) and Ioana (born July 27, 1953). Two days before Ioana’s birth, Dr. Sofia Ionescu appeared to be working even more than usual. The couple practically lived in the hospital for seven years in order to provide continuous, uninterrupted on-call service, without so much as one day of vacation.¹

With regards to how the children were raised, they wanted for nothing, aside from parents that were more present than absent in their lives¹⁴. Dr. Sofia Ionescu was frequently asked whether sacrificing all that time with her children was worth giving herself so completely to her profession, as if striving to attain victory over death itself. She never quite knew how to respond.

MEMORABLE MOMENTS

Prof. Dr. C. Arseni, publicly stated in an interview with Romanian Television that it is possible Dr. Sofia Ionescu is the world’s first woman neurosurgeon, also relating an instance in March 1970, when the President of the Persian Gulf Sheikdoms were searching the world for a female neurosurgeon that could consult his favorite wife. Possessing an English education, Sheikh Zaiid Bin Sultan al Nohaian of Abu Dhabi, began his search for a female neurosurgeon in England, and then in every country, as religious tradition prohibited another man from consulting his wife. Upon receiving the Sheikh’s request, the Romanian Ministry of Health arranged the necessary formalities for Dr. Ionescu’s departure to the Persian Gulf. The 27-year-old preferred wife of the Sheikh began to suffer from lumbar discopathy shortly after her ninth pregnancy.¹

“It was a most spectacular, and, in any case, most opulent voyage. I gained access to a harem. Towards the end [of my stay], [the Sheikh] held a celebration in my honor, where all of the [Sheikh’s] wives were invited, even though they typically do not gather except on the occasion of the birth of a child.”

Dr. Ionescu’s mission to the Persian Gulf was even reported by the Lebanese (Beirut) press at the time.

After operating the husband of Maria Tănase (*i.e.*, an ablation of cerebral metastases originating

from the lungs), Dr. Sofia Ionescu became the muse of renowned sculptor Florica Hociung, who was a close friend of the patient. Despite being present at a number of exhibitions, Dr. Ionescu received but a simple photograph of the artwork.^[15]

IN RETROSPECT

“I regret not finding the time to write a memoir. I could have imparted to young neurosurgeons how I approached this craft. I could have described novel techniques, improvised spontaneously in unplanned [intraoperative] events, in countless instances, with favorable outcomes. As my life’s work throughout these 47 years could have easily filled two lifetimes, I would have had plenty to tell them!”¹ – Dr. Sofia Ionescu.

PATIENT GRATITUDE

“May you receive many blessings. Best wishes and good fortune from Belgrade, where I have been working for several months. For the fact that today I have my full mental capacity, I will be grateful to you for the rest of my life. For me, you are the most illustrious person in existence. Thank you.”¹ – patient.

“Dear highly-esteemed Dr. Sofia Ionescu, I entrust these words to convey my feelings of gratitude which manifest themselves, year after year, as I remember the surgical intervention in March 1968, when you restored a thread of life whose continued unraveling had been so very threatened. It is my wish you truly realize what a glowing image I will always retain of you in my memory. Please allow me to express my best wishes for your future, and, of course, may your children’s future also shine bright, who are probably currently gearing up professionally, with the same attire of excellence that you yourself possess. Many Happy Returns!”¹ – patient.

“A thousand thanks! Thank you for the life that you restored for me, and I wish you thousands of successes in your work. I am a happy grandmother. I hope to thank you personally soon. With esteem and respect.”¹ – patient.

CONCLUSION

This article is written to commemorate the centennial of the birth of our internationally renowned feminine legend of Neurosurgery, who will forever

endure in our collective memory and in the soul of the Romanian people, to whom she gave herself so completely.

In a televised interview with Eugenia Voda, in a piece entitled “Professionals” broadcast on Romanian Television Channel 1 (TVR1), Dr. Sofia Ionescu was asked, “But now, looking back on a life full of so much work, work, work, what would be your major [source of] satisfaction?”, to which Dr. Ionescu replied, “My major [source of] satisfaction and consolation would be that I fulfilled Dr. Bagdasar’s last wish: That we do everything possible to advance this specialty. To be united. To continue what we started with the

same vigor, the same passion, and, above all, with a high moral standard.”^{7, 14}

COMMENTS

“I pay tribute to all those who built the foundations of neurosurgery and who contributed to the advancement of this extremely challenging specialty; every step forward meant a new level of knowledge and understanding of the human brain and finding the most appropriate surgical solution possible.”^[15]– Prof. Dr. Alexandru Vlad Ciurea.



Figure 1. Homage sculpture of Sofia Ionescu by Florica Hociung. Photo: from the book: “Restless Good – The Neurosurgeon Dr. Sofia Ionescu – Rodica Simionescu”, used with permission from the author.



Figure 2. Portrait of Dr. Sofia Ionescu. The first woman neurosurgeon in the world. Photo: from the book: “Restless Good – The Neurosurgeon Dr. Sofia Ionescu – Rodica Simionescu”, used with permission from the author.



Figure 3. Intraoperative photograph; Neurosurgeon Dr. Sofia Ionescu. Photo: from the book: “Restless Good – The Neurosurgeon Dr. Sofia Ionescu – Rodica Simionescu”, used with permission from the author.

REFERENCES

1. “Simionescu Rodica. Neodihna binelui – Neurochirurg Dr. Sofia Ionescu, Călărași, Editura... 1998.”
2. “Mohan, D; Mohan, AG; Moisa, HA; Ciurea, AV:80 Years Since the Birth of Neurosurgery in Romania a Brief Historical Vignette. Proc. Rom. Acad., Series B, 17(1):87–91, 2015.”
3. “Mihailide M: O legendă a neurochirurgiei Românești. Viața medicală, București, 2011.”
4. “Ciurea, AV, Moisa, H, Mohan, D: Sofia Ionescu: The first woman neurosurgeon in the World. World Neurosurg. 80(5):650-3, 2013.”
5. “Ciurea, AV: Istoria Neurochirurgiei Române. Editura Viața Medicală Românească, București, 1995.”
6. “Dinca, EB; Banu, M; Ciurea, AV; Constantin, N. Arseni: Centenary: The birth of modern neurosurgery in Romania. World Neurosurg. 82(1-2): 371-373. 1994.”
7. “Micutariu, D. Fălticeneanca: Sofia Ionescu-Ogrezeanu a murit la 88 de ani. Monitorul. Suceava, 2011.”
8. “Nicolau, S: "Doctor Sofia Ionescu – Primum Inter Pares – Prima Femeie Neurochirurg din România. Repere iatrohistorice, 84-6, București, 1945.”
9. “Cârlea, D: Sofia Ionescu, prima româncă neurochirurg. Ziarul Lumina, București, 2012.”
10. “Roșca, T: Sofia Ionescu – Prima femeie neurochirurg din România și din lume. Pagini medicale bărladene, 38:4, Bârlad, 2001.”
11. “Ionescu, Sofia: Hematom intracerebral profund, operat în 1968 printr-o operație ad-hoc premergătoare neuroendoscopiei, Manuscris, București, 1968.”

12. "Aldea H: Neurochirurgi celebri, Ed. Glasul Bucovinei, Iași, 1993."
13. "Ogrezeanu, I: Women in Neurosurgery. The 13th WFNS Congress, Marrakech, 19-24 June"
14. "Ogrezeanu, I; Ciurea, AV: Sofia Ionescu – O biografie de excepție, "Tratat de Neurochirurgie", Vol. 1, pag 72-72, Editura Medicala 2010".
15. "Ciurea, AV: Călătorii în centrul gândirii, Ed. Minerva, București, pag. 2016."