

ISSN 1220-8841 (Print)
ISSN 2344-4959 (Online)

ROMANIAN
NEUROSURGERY

Vol. XXXVI | No. 3 September 2022

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DOI: 10.33962/roneuro-2022-064



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ABSTRACT

Prof. Madjid Samii is an internationally recognized neurosurgeon who has conquered the highest levels of 21st-century neurosurgery. Born in Iran, he decided to take medical courses at the University of Mainz, Hanover, Germany. He earned his medical degree in 1963, marking the highest achievable score, and started his residency, guided by Emeritus Professor Dr Kurt Schurmann. Numerous various surgeries and studies that reshaped the field of neurosurgery describe his career. Starting with a publication regarding a new technique, pneumencephalotomography, he has steadily been ascending, studying and writing about cranial nerves, developing the surgery of the skull base and proving that the transnasal approach is preferred in clivus chondromas. Prof. Madjid Samii founded, 1990, the Foundation of National and Continental Skull Base Societies and, and since 2001, he has been the Honorary President of the World Federation of Neurosurgery Societies (WFNS). Not only was he successful in his scientific path, but he also gave an example for the future generation of what astonishing results can be obtained with hard work, commitment, and a leader's spirit. He wanted to take worldwide neurosurgery to a whole new level, so he came up with an idea, the concept of an international neuro-excellence centre, which quickly became the reality of the International Neuroscience Institute of Hanover.

BRIEF PRESENTATION OF THE EVOLUTION OF NEUROSURGERY

Taking a trip down memory lane, neurosurgery is a surgical specialty that set about to develop at the beginning of the 20th century. Since

Keywords

Madjid Samii,
neurosurgery,
worldwide,
pneumencephalotomography,
cranial nerves,
skull-base,
WFNS,
president,
future



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ISSN online 2344-4959
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Neurosurgery



First published
September 2022 by
London Academic Publishing
www.lapub.co.uk

then, it has been in a progressive evolution, swayed by the contributions of grand names such as Harvey Cushing (1869-1939) and Gazi Yasargil (1925-).

Harvey Cushing (Figure 1), remembered as the father of modern neurosurgery, was an American pioneer of modern operative techniques in brain surgery. His significant contributions have made neurosurgery more approachable and understandable for future generations.

Gazi Yasargil (Figure 1) is a Turkish neurosurgeon who managed to revolutionize brain surgery by introducing micro-neurosurgery. He was the founder of micro-neurosurgery and trained countless surgeons in the micro-neurosurgical anatomical laboratory in Zürich, Switzerland.

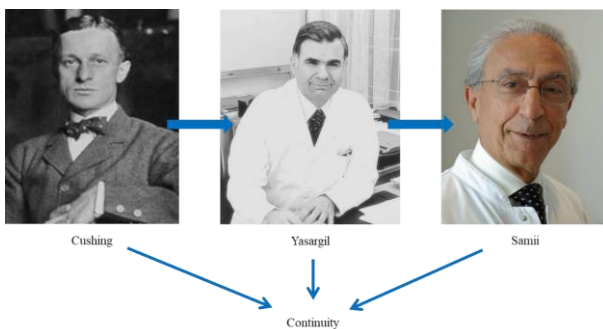


Figure 1. Harvey Cushing, Gazi Yasargil, Madjid Samii (golden triangle of neurosurgery)

We considered reminiscing these two names as a glimpse of recognition for their scientific and spiritual influences that push neurosurgery to reach new horizons nowadays.

Certainly, the highest level of 21st century global neurosurgery has been conquered by Prof. Madjid Samii (born in 1937, Teheran), not only through his surgical activity but also through his innovative and societal actions.

MADJID SAMII - LIFE, CAREER AND ACHIEVEMENTS

Prof. Madjid Samii (Figure 2) is a neurosurgeon who dedicated his career to solving the hardest and most complicated cases, to educating future neurosurgeons, and to publishing an astonishing number of statistics.

He was born on the 19th of June 1937 in Tehran, Iran. After graduating high school in Iran, he moved to Germany, where he studied medicine at the University of Mainz.

Earning his medical degree from the University of Mainz in 1963 by marking the highest achievable score in the final medical examination made him the recipient of the prize of the Iranian Science Ministry for the best Iranian student in Europe.



Figure 2. Prof. Dr Med. Madjid Samii (WFNS-President)

Prof. Madjid Samii finished his neurosurgical residency at the same university, learning from the Emeritus Professor Dr. Kurt Schurmann, who provided him with de Cushing's motto: "Through Valor and Divine Aid" and receiving his board of neurosurgery in 1970.

Being inspired by what was known at that time: pneumoencephalography-Walter Dandy (1886-1946) and cerebral angiography-Egas Moniz (1927-2017), Prof. Madjid Samii thought about a new technique and published his first paper, named "pneumencephalotomography", together with Prof. Schurmann in 1965.

Three years later, his innovative thinking was brought back to light. He used the previous technique, developing a more advanced one-"Combined ventriculo-lumbar puncture" and, by

using it, he realized the first radiologic diagnosis of Hydrocephalus occlusus. Furthermore, this technique was performed by him in the treatment of a case of Dorsum sellae Chiasma Compression Syndrome (1972).

Prof. Madjid Samii was one of the first to use a microscope in the operating room, back in 1969. Afterwards, he dedicated his time to the study of peripheral and cranial nerves, focusing on nerve grafting and nerve transfer operative techniques. Two years later, he achieved the success of a hand reimplantation surgery. During the same year, he published "The Cranial Nerves" book.

He also developed the surgery of the skull base. In 1970, he built the first interdisciplinary team in Hanover, consisting of neurosurgery, ear, nose and throat (ENT) and maxillofacial surgery doctors. As a result of his hard work, in 1989, he published "Surgery of the Skull Base-An Interdisciplinary Approach" book. Regarding the skull base surgery, Prof. Madjid Samii founded in 1990 the Foundation of National and Continental Skull Base Societies and the Foundation of German Skull Base Society (of which he is president).

His statement is, "The only real treasures a neurosurgeon can have in his life are his patients". It may explain his commitment to studying, innovating, and discovering during his entire career. Thus, he studied all the approaches for clivus and proved that the transnasal approach is preferred in clivus chondromas (using an endoscope and microscope).

In 2013, he published the "Surgery of Cerebellopontine Lesions" book, in view of presenting his professional experience between 1968 and 2013 (more than 6000 surgeries).

His work and discipline encourage surgeons from all around the world to manage the most difficult cases with extreme precision and determination. He gave lectures that represented a major contribution to the progress of neurosurgery, while publishing numerous papers and statistics.

In 1977, Prof. Madjid Samii became chairman of the Neurosurgical Department at Nordstadt Krankenhaus, in Hanover, Germany. He also accepted the chair of Neurosurgery at Hanover School of Medicine.

Between 1997-2001, he was elected president of the World Federation of Neurosurgery Societies (WFNS) according to his societal and humanitarian contributions worldwide through his work. Since

2001, he has been the honorary president of WFNS and the honorary president of the WFNS Foundation.

THE INTERNATIONAL NEUROSCIENCE INSTITUTE OF HANOVER

Prof. Madjid Samii's considerable capacity for leadership gives Hanover, Germany, one of the most recognized centers of excellence in neurosurgery in the world, raising European neurosurgery to a more advanced level.

He managed to fulfill his idea of creating a comprehensive neurosurgical center, the International Neuroscience Institute of Hanover. **In 2000, at the World Expo event, the International Neuroscience Institute of Hanover was officially inaugurated, becoming rapidly the best center for treating neurosurgical conditions.**

Although the project was realized by the "Siemens" Company, the ideas of Prof. Madjid Samii were vigorously taken into consideration, the interior and exterior designs of the building being decisively influenced by his suggestions.

Shaped as a "futuristic" human brain, the International Neuroscience Institute of Hanover (Figure 3) is a unique architectural landmark, enhancing the suggestion that any pathology of the nervous system can be cured.



Figure 3. International Neuroscience Institute of Hanover (Open in 2000)

The main areas of the Institute consist of three separate but synergetic departments: Neurology, Neurosurgery, and Interventional Neuroradiology.

For an elitist final result, it was mandatory to build a team formed by the most competent neurosurgeons. In this matter, Prof. Madjid Samii's imposing personality helped the Institute to quickly have the brightest neurosurgeons for each neurosurgical subspecialty practicable.

The Institute is also focused on skill-improvement specialized training as well as on clinical research, having various laboratories for scientific experiments with successful results spread worldwide.

Compared to developing countries, the International Neuroscience Institute of Hanover uses highly technological devices for paraclinical analysis, such as: 3 Tesla MRI, functional MRI, a 128-slice CT scanner, and a biplane angiography system.

The International Neuroscience Institute of Hanover was soon followed by the International Neuroscience Institute of China (Beijing) and the International Neuroscience Institute of Iran (Teheran).

ROMANIAN NEUROSURGERY AT THE INTERNATIONAL NEUROSCIENCE INSTITUTE OF HANOVER

Last but not least, we have to mention that Prof. Madjid Samii is a real friend of the Romanian Neurosurgical Society, as he answers positively to the many congress invitations. He built a strong relationship with the greatest Romanian neurosurgeons.

A special bond was created in 2014, when Prof. Madjid Samii invited Prof. Alexandru Vlad Ciurea to the International Neuroscience Institute of Hanover (Figure 4). Prof. Alexandru Vlad Ciurea presented a truly complex medical study regarding the embryology and development of the human brain, afterwards being awarded by Prof. Madjid Samii with the title of "Visiting Professor".



Figure 4. Prof. A.V. Ciurea & Prof Madjid Samii

As Prof. Madjid Samii reaches the age of 85, we would like to pay tribute to his major innovative, scientific, and humanitarian contributions to the field of international neurosurgery

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