



The Professor We Knew

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ABSTRACT

Microsurgery is a remarkable gift that Professor Yaşargil has bestowed upon humanity, revolutionizing the field of surgery and opening up new possibilities for potential cure. In his brilliant career, Professor Yaşargil after his retirement from the chairmanship at the University of Zurich, he was accepted the invitation to join the department of neurosurgery at the University of Arkansas for Medical Sciences. We reflect on these very special years during which we had the opportunity to witness not only his devotion to microneurosurgery, and his scholarly scientific indulgence, but also his humanistic attributes. He touched the lives of so many through the years.

KEYWORDS: M Gazi Yaşargil, Little Rock, Microneurosurgery

“There are very few people who ever lived to have the opportunity to create a true revolution in science, to change the paradigm in such a way that everything is new, and everything is fresh, and that some of the old challenges are completely eradicated, and some of the new challenges are things that we never would have dreamed of. This is what professor Yaşargil ; you have created for us, a scientific revolution, a new paradigm, not only in neurosurgery, and I have heard you speak about this, but in the concept that goes with it; micro technique, the whole concept of understanding the anatomy of the brain in a new way that makes it approachable for us to deal with things that we never dreamed would be in the province of our beloved field of neurosurgery. We all love neurosurgery. We love being Neurosurgeons, and what you have given us is something beyond that, something to truly treasure, and God willing to further improve upon in our small way.” (Figure 1).

– Dr. Edward R. Laws, 2005 (5)



Figure 1: A) Dr Laws speech at the president of the World Federation at 13th world congress in Marrakech, Morocco. B) photograph at the 80th birthday celebration during the same event as the attendants in thousands sang “Happy Birthday” to professor Yaşargil, each in their own native tongue.



Dr Laws' words eloquently express professor Yaşargil 's legacy and his monumental contribution in transforming the art of surgery to the height of microneurosurgery. In Little Rock, small and distant bastion of tranquility in the center of the country, we have had the fortune to spend 16 years with a special relation and interaction with professor Yaşargil that transcended our specialty and working borders to an oasis of humanity, intellectual curiosity, and visionary thoughts. They were unparalleled inspiring and fulfilling years. Yaşargil 's scientific and neurosurgical contributions are well known to the world and everlasting. In these few lines, we touch on some aspects. We were so fortunate and privileged to learn, witness, and interact with him.

■ MICRONEUROSURGERY WILL NEVER DIE

As daring as professor Yaşargil was, he frequently expressed his looming fear that microneurosurgery will be abandoned. Nowadays, we are witnessing changes in paradigms of patient management, explosion of technology, re-engineering of healthcare delivery, advances in biology. Many are welcomed progress. The changes also are in the attitude and the aspiration of physicians. Surgical treatment is taking, sadly, the backseat to new practices marching under the banner of minimally invasive and futuristic treatment many without verification of effectiveness. Cure replaced with control. Algorithms and soon artificial intelligence, skew the physician's judgement and dictate the treatment along preset biases. The current foggy atmosphere of neurosurgery makes one realize how critical and influential professor Yaşargil was in upholding the value and superiority of microneurosurgery. It was, like he so often said "a human brain that is operating on a human brain". It is not a pathway, it is not an approach, it is not a device, and it is not a statistic; as been stated, "Yaşargil exemplifies the "Operative Neurosurgeon" in whom a brilliant mind and devoted soul guide gifted hands. Microneurosurgery is the culmination of art, science, and ethics. It is the masterful execution of a well thought out plan of profound knowledge of anatomy and ever excelling with experience." (2). His thrive for excellence was a relentless pursue of a better technique. Thus, the area which he thought needed improvement, he would encourage us to find betterment. No better example than Dr. Krisht taking basilar aneurysm clipping to a higher level (4).

Millions of lives were saved by microneurosurgery and more to be cured in the future. Microneurosurgery was the road Professor Yaşargil has paved for us to follow. It has no end. Microneurosurgery is flourishing in several esteemed centers around the world. In Little Rock, Yaşargil 's Legacy live and thrive at the Arkansas Neuroscience Institute established by Dr. Ali Krisht (Figure 2). Microneurosurgery will never die. "It's in the book, read it!" as Yaşargil repeatedly proclaimed (Figure 3).



Figure 2: Composite photo depicting the Arkansas Neuroscience Institute at CHI St. Vincent in Little Rock, Arkansas that hosts Yaşargil's neurosurgical research & education center. Including as he had always urged a microsurgical lab.

■ HEALER

"We must help." Yaşargil utterness dealing with every patient. He believed that medicine is a mission, not a job; and that every patient deserves his full dedication. He is a doctor, not a mere technician. He built that bond of trust with the patients and their families by his full commitment to the wellbeing and interest of every matter surrounding the patient's illness. He knew that to really help patients, the doctor needs to be at his best including not only possessing outstanding knowledge or experience but attending to the patient's and the family's emotional needs. He cared and they knew it. He spent hours in the original encounter. He stationed himself at the bedside of the ICU till the patient sailed to safety. He knew and studied every test and was liberal in asking other experts of any aspect of the patient's care. This devotion was manifested by the solemn belief that the surgeon must be at his best, and that microneurosurgery was mastering both the normal and pathological anatomy and acquiring the skills in laboratory practice. He could not fathom how a surgeon would operate on a human brain without profound knowledge of the anatomy. To merely hold a wand and drive through to a computer target was incomprehensible to him. He teasingly used to say "frameless (stereotactic navigation) for the brainless"; not dismissing the value of technological innovation but stressing the

fundamental knowledge of anatomy. He urged the research fellows to learn and study the intrinsic anatomy of the brain by fiber dissection technique, while tempering their total immersion into learning the anatomy of the skull-base. To him, brain anatomy was more critical than bone anatomy. The fruit of this emphasis became the advanced field of microneurosurgery based on intrinsic anatomy of the brain as mastered and taught by professors U. Ture, N. Krayenbhul and P. Kadri (Figure 4).

Helping patients best, to him, was to perform a flawless surgery with fine outcome. That needed to continuously perform better operation. Thus, it was essential for any neurosurgeon to undertake operations on brain is to earnestly practice the techniques of microneurosurgery in the laboratory. That lab practice was an absolute must for any person seeking to be a neurosurgeon. The microneurosurgery lab in Zurich is renowned for his graduates whose many became master surgeons and world leaders of neurosurgery. He urged the establishment of a microneurosurgery lab at the University of Arkansas and cultivated fellows to practice and study in the lab, many of whom today, are renowned and leader neurosurgeons (Figure 5). A particular lab endeavor that captured his interest is when Dr. E. Aboud had created an innovative model of having circulating blood like fluid in the cadaver which made lab practice closer to real time surgery (Figure 6) (1).



Figure 3: The 4 volume books of professor Yaşargil that he presented to Dr Al-Mefty. Yaşargil for years worked on his Microneurosurgery books. It is an encyclopedic embodiment of the field of microneurosurgery. It is and will remain the reliable guide to neurosurgeons.

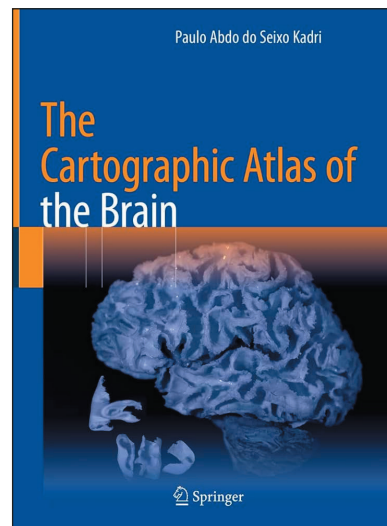


Figure 4: Dr Paulo Kadri’s seminal book “The Cartographic Atlas of the Brain” stemmed by Prof. Yaşargil urging Dr. Kadri to learn intrinsic brain anatomy.



Figure 5: Lab demonstration was his prime push to every neurosurgeon and enthusiastically lead the demonstrations on every occasion.



Figure 6: Professor Yaşargil and Dr. Emad About practicing on the “About Live Cadaver Model.”

■ FAMILY

Most neurosurgeons knew Yaşargil as the stern, serious, all-work, devoted scholar thriving for perfection. There was a side of him that we were so blessed to enjoy: the caring professor. In the atmosphere of trust and respect, Yaşargil would let down his guard and ease his worries (Figure 7). Ms. Dianne Yaşargil, who was always by and on his side, had essential contribution to the success and remarkable era of neurosurgery during Yaşargil’s years in Little Rock. Diane’s grace, however, was radiating and felt among all of us, surpassing her great professional role.

Yaşargil enjoyed himself and all the others present around enjoyed him. He poured his knowledge of art, history, and philosophy on the grown-ups among us while he inspired the young and entertained the children (Figure 8).

The man with the big vision, tireless pursuit of excellence, demanding the best out of everyone, had a big heart and played with the children.

It could be all summed up by the dedication of the Operative Atlas of Meningiomas to Professor Yaşargil: “To Professor M. Gazi Yaşargil – his brilliant mind changed the world of neurosurgery, his gifted hands changed the world of so many patients, and his caring heart changed my world.” (3).



Figure 7: Professor Yaşargil in a conference at his early time in the department of neurosurgery at University of Arkansas Medical Sciences beaming with happiness, joking with dr Al-Mefty.

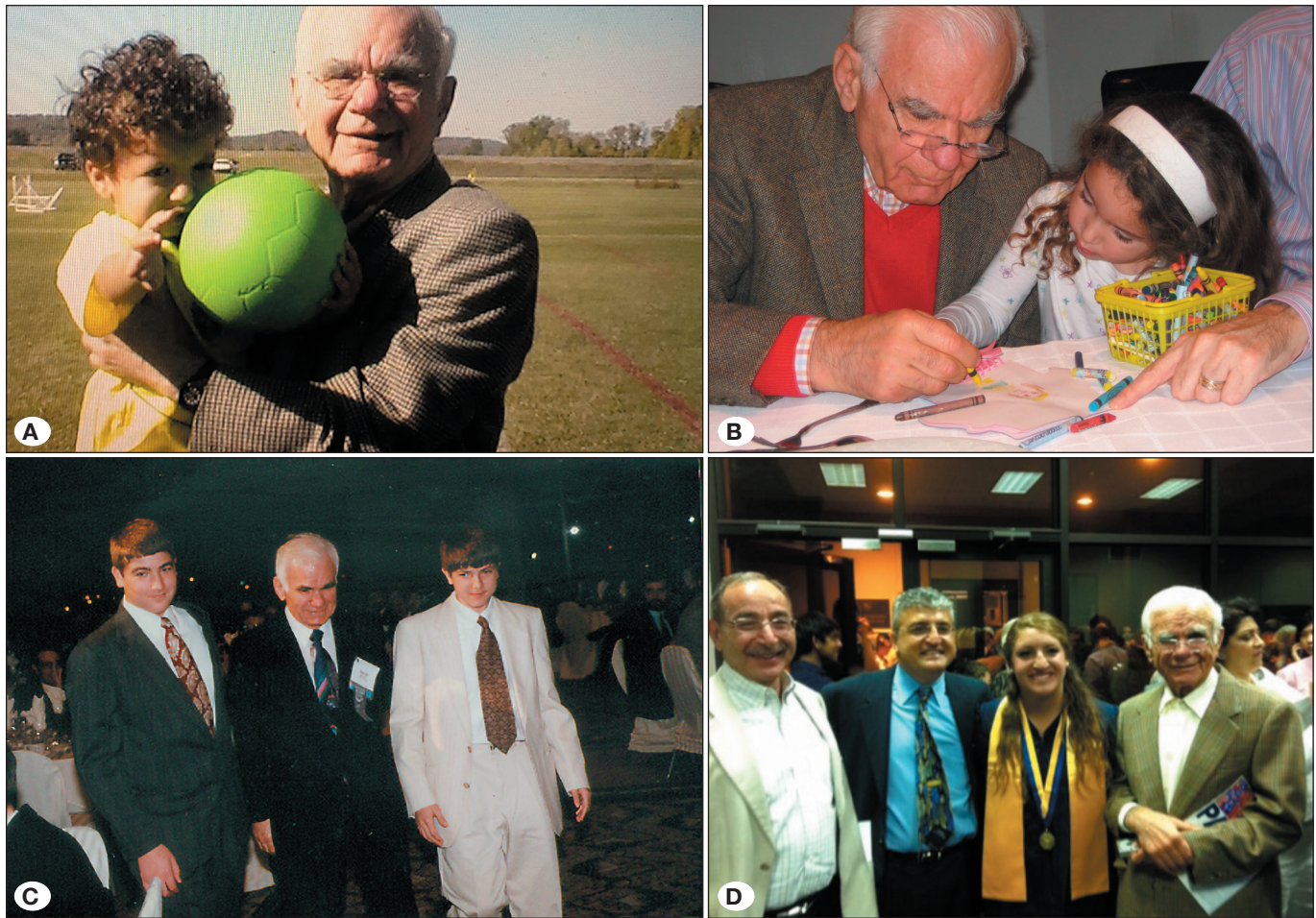


Figure 8: **A)** Photograph of professor Yaşargil playing with Dr. Ali Krisht's son Hasun on the soccer field, **B)** Professor Yaşargil following the instruction for coloring with Leila, granddaughter of Dr. Al-Mefty, **C)** At the skull base society meeting in Little Rock 1996, the young Kaith and Rami Al-Mefty walked professor Yaşargil to the podium. Certainly, they were inspired to become neurosurgeons like him. **D)** Professor Yaşargil always celebrated the family's success, as seen here, celebrating the graduation of Geenah Krisht.

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