OBITUARY



Obituary Acad. Prof. Dr. Vinko V. Dolenc 1940 - 2025

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It is with profound sadness that the Slovenian Neurosurgical Society announces the passing of Professor Vinko V. Dolenc, one of the giants in skull base and cavernous sinus microsurgery, on January 16, 2025 in his hometown Ljubljana, Slovenia.

Prof. Dolenc is recognized as a pioneer in the surgical treatment of cavernous sinus lesions, having developed surgical techniques that allow for direct microsurgical repair of

intracavernous vascular lesions, and have subsequently been named as the Dolenc approach. His abundant clinical experience and results in this area were based on his own precedent and continuous anatomical laboratory studies since 1979. Extradural removal of the anterior clinoid process, unroofing of the optic canal, innovative dural splitting of the lateral wall of the cavernous sinus, haemostatic control of the cavernous sinus and carotid flow in the intracavernous space and petrous bone, and anatomical naming of the extradurally exposed triangles of the cavernous sinus are now part of the basic knowledge of modern approaches to central skull base lesions.

Professor Dolenc was born on June 29, 1940, in Sestrže near Ptuj, Slovenia. After completing his medical education at the University of Ljubljana in 1966, he went on to specialize in neurosurgery, earning both his MSc degree and specialist qualification in 1974, followed by his PhD in 1977. He was a regular professor at faculty of Medicine, University of Ljubljana. He became a member of the Slovenian Academy of Art and Science in 1993. He is an honorary member of the World Academy of Neurosurgery since it's establishment in 2005.

Prof. Dolenc was among the first in the region to adopt new microsurgical techniques and started with the microsurgical repair of peripheral nerve injuries (since 1969). The topics of both his MSc and PhD theses were within the field of peripheral nerve regeneration and the results of microsurgical suturing in humans. The first Beck's operative microscope in his hospital was a thankful donation (1968) from British Airways for in recognition of unselfish medical help and effective treatment of survivors from airplane crash accident on Sept 1st, 1966 near Ljubljana-Brnik airport (98 of 117 people died).

A few years later he was among the first to treat certain aneurysms through microsurgical techniques (including endto-end anastomosis and grafting in 1978 [1, 2] and direct PICA suturing in 1982 [3]). He organized 3 international courses (1976, 1978, 1980) on microsurgery for peripheral nerve injury in Ljubljana, Slovenia in collaboration with Prof. Samii (1976) and Prof. Yasargil (1978) and expanded

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the second and third courses to include microsurgery of cerebral blood vessels.

Prof. Dolenc was among the first neurosurgeons worldwide to advocate aneurysm treatment in the acute phase of aneurysmal subarachnoid haemorrhage (he started acute surgeries as early as 1976). By the end of the decade, the number of aneurysms he operated on during the acute phase reached up to 50%. At the International Symposium on the Aneurysm Treatment in Acute Stage in Graz, Austria 1981, he presented his experiences including removal of CSF blood from the subarachnoid space and opening the IIIrd ventricle in order to improve the circulation of the CSF, which significantly reduced the incidence of postoperative hydrocephalus in these patients. According to his words, he was criticized for opening lamina terminalis, which became the routine practice for these patients some years later.

Prior to the Parkinson report in 1965, there was little enthusiasm in the management of pathologies in the cavernous sinus area. As late as 1978, Trobe and coworkers reviewed a series of 6 cavernous meningiomas and 9 aneurysms and concluded that "craniotomy is not recommended". In 1979 J. Lawton Smith commented that neither of the two lesions in the cavernous sinus (meningioma or aneurysm) should be considered surgical targets. Almost at the same time (1981 - 1983), Prof. Dolenc, after careful and exhaustive anatomical studies, undertook direct surgical repair of intracavernous vascular lesions in 7 patients, without using any extra-corporeal circulation (J Neurosurg. 1983 [4]). These cases, predicted by Parkinson's pioneering work, were the opening salvo in what has become a flock of surgical cases involving the cavernous sinus. The first experience in dealing with vascular lesions in the parasellar space was presented at the International Neurosurgical Meeting in Munich in 1981. According to his words, his technique was strongly opposed by disbelieving remarks of some authorities in neurosurgery of that era.

The interest for cavernous sinus surgery was on a steep rise in the 1980's, and many other courageous and openminded neurosurgeons of that era took that challenge forwards. Some of the anatomically named CS triangles, given by Dolenc and published in his first book (1989) have also been named in the literature by other famous neurosurgeons of that era in acknowledgement of their contributions. The anteromedial triangle is nowadays named Dolenc's triangle, as he showed and popularized extradural anterior clinoid removal as a crucial step to unlock the cavernous sinus. He further elaborated the approach to carotid-ophthalmic aneusysms (ACP removal and distal dural ring resection) and the combined epi- and subdural direct approach to carotid-opthalmic aneurysms which was published in the J. Neurosurg. 1985 [5]. A great challenge for him were basilar tip aneurysms. His innovative transcavernous-transsellar approach to the basilar tip aneurysms was published in British J Neurosurg. 1987 [6].

To promote the idea of direct microsurgical approaches to the cavernous sinus, Prof. Dolenc organized the First International Symposium on the Cavernous Sinus (1st ISOCS) in Ljubljana, Slovenia in 1986. This meeting was small but attended by the first generation of eminent neurosurgeons that participated in skull base surgery: Parkinson, Takakura, Hakuba, Fukushima, Sano, Sekhar, Perneczky, Umansky, Knosp and Kawase. Subsequent to that meeting, the topics on skull base pathologies as well as the anatomical studies on the cavernous sinus have been included in the majority of neurosurgical meetings around the globe. The 2nd ISOCS was organized 20 years later and the 3rd in Little Rock, Arkansas in collaboration with Prof. Ali Krisht, Even in this day and age, the topic on cavernous sinus surgery is a hot theme in skull base congresses worldwide. Although endovascular techniques and radiosurgery may prevail in the treatment of cavernous sinus lesions nowadays, the anatomical knowledge of this area still has a great value in skull base surgery. Prof. Dolenc has produced numerous publications (226) including 5 books on this specialized topic (1987, 1989, 2003, 2009, the 5th is translated into Chinese language) [7-10]. The second book, "Anatomy and surgery of the Cavernous Sinus" (Springer Verlag-Wien, 1989) was the first to eloquently describe the anatomy of the cavernous sinus in a practical surgical manner allowing clinical application to the pathologies encountered in this region. In his foreword to Dolenc's book, Prof. Yasargil stated that "there is no doubt that this type of microsurgical anatomical study is a new step in the 100-year history of neurosurgery" [8].

Besides his scientific work in the field of central skull base surgical anatomy, which has empowered us with profound insights into the anatomical "jewerly box" or "no man's land", his exceptional microsurgical abilities in relation to some of the most challenging cases in this area have entitled him the title of a master neurosurgeon. It should be brought to attention his passionate endurance over more than three decades in disseminating the art and spirit of neurosurgery worldwide in the form of invited lectures (335), special lecturer (23), organizer or faculty at workshops (79) and performing visiting surgeries (invited to 117 institutions in 31 countries, performing more than 410 live surgeries). 760 neurosurgeons and/or neurosurgical residents have visited his domicile Department of Neurosurgery at UMC Ljubljana, Slovenia to observe him at work and study in his anatomical laboratory. He has inspired and motivated thousands of neurosurgeons worldwide to learn their craft in the anatomical laboratory, in order to evolve themselves and persist working in this the most demanding field of neurosurgery, the central skull base.

He was chief of the Department of neurosurgery at University Medical Center in Ljubljana for nearly a quarter of

a century (1987–2010). He retired in 2018 but kept lecturing and performing surgeries abroad. He was coming to his office regularly in the department and kept vivid contact with the department, where he was always welcomed, adored and respected. He was a charismatic person, a passionate educator, a brilliant neurosurgeon and exceptional strategist in neurosurgery. Besides his academic titles, he had an uncomplicated personality and had great empathy for everyone. There was always a lot of smiling around him.

Despite many offers and opportunities on both sides of the ocean he remained faithful and loyal to his homeland and his hospital throughout his entire career. His last three decades were bitter and life energy draining, as he was fighting for truth alone at the international courts due to a complicated outcome in one of his foreign patients. The late acquittal verdict of the European Court on human rights in 2022 brought him some satisfaction and minor peace of soul, which he didn't enjoy long. He explained his legacy in the autobiographical book To neurosurgery with love and passion - Nemo propheta in patria. The book shows not only his enormous professional network he built inside the neurosurgical community around the world, but also how a neurosurgeon from a small country (from the other side of the iron curtain) with no established institutional background can "break through" in the world with innovative ideas, talent, hard work and determination. He received a very well deserved prized Exceptional service to European neurosurgery by the EANS in Belgrade in 2022. In December 2023 he received the Medal of Honor at WFNS congress in Cape Town, the highest recognition for his contributions in neurosurgery. Here, he thanked his teachers, co-workers and his collegues and staff at his department for their support. He visited the Cape of Good Hope and complained only of knee pain. Unfortunately and tragically, following a second bout of septic endocarditis in late Summer 2024 he was not able to recover.

He lived for neurosurgery. His dedication to neurosurgery shone like a comet across the sky. The loss of Prof. Dolenc is immeasurable for the entire field of neurosurgery. His legacy will forever be remembered and cherished by those who had the privilege of learning from and working alongside him. His contributions will continue to guide and inspire future generations.

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