Management of surgical disorders of the cranio-cervical junction: Report of 100 cases

Majid Reza Farrokhi
Shiraz University of Medical Sciences, Iran

The cranio-vertebral junction (CVJ) houses the crossroads of the central nervous system and is defined as the region encompassing the occiput, the first and second cervical vertebra. This region represents a transitional area between the brain and the spine. This study aims to evaluate the surgical treatment of pathologies in the region of CVJ. These pathologies can be congenital, neoplastic (tumors), inflammatory, traumatic, and degenerative. One-hundred patients with CVJ pathologies were surgically treated in Shiraz University of Medical Sciences. CVJ was diagnosed by CT and MRI of the brain and upper spinal cord. Plain x-rays (lateral view of the skull showing the cervical spine, antero-posterior view and oblique views of the cervical spine) were used to identify factors that influence treatment. Surgical decompression, using a ventral or a dorsal approach, was required. If instability was present after decompression, posterior fixation was performed. From a total of 100 patients, 5% of the patients presented with myelopathy, 15% with brainstem dysfunction, 25% with cervical radiculopathy and combined symptoms (10%). These disorders comprise congenital disorders 35%, tumors 35%, trauma 20%, and infection 10%. Posterior fusion was performed in 15% of the congenital disorders, 20% of the trauma, 10% of tumors and 5% of the infection. Our complications were death (1%), cerebrospinal fluid leakage (10%), new neurologic deficit (5%), sub-occipital pain (10%), neck-radicular pain (20%), hydrocephalus (1%) and instrument failure (2%). Prompt diagnosis and microsurgical management, offering a greater chance of immediate obliteration, may optimize the outcomes for patients with CVJ pathologies.

Biography

Majid Reza Farrokhi is a Professor of Neurosurgery and Head of Shiraz Neuroscience Research Center in Shiraz University of Medical Sciences. He completed his Specialty Degree in Neurosurgery in 1996 and Fellowship of Spine Surgery at Innsbruck University in 2004. He has been the Vice President of Iranian Board of Examiners in Neurosurgery since 2012 and served as the Chairman of Neurosurgery Department of Shiraz University of Medical Sciences in 2011-2014. Head of Fars and South of Iran AO-Spine Society in 2002-2005 and Dean of Medical School, Bushehr University of Medical Sciences in 1996-1998. He has published more than 35 papers in reputed journals and 2 books and led several research projects. His investigations have been focused in spine.

farrokhime@yahoo.com

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