MIKROANATOMI DURAMETER PADA PARS NERVOSA FORAMEN JUGULARIS

Mohammad Zafrullah Arifin¹, Agung Budi Sutiono^{1,2}, Kahdar Wiriadisastra¹, Beni Atmadja Wirjomartani¹, Achmad Adam¹, Akhmad Imron¹, Roland Sidabutar¹, Rully Hanafi dahlan¹, Takeshi Kawase², Kazunari Yoshida², Takashi Horiguchi²

¹Neurosurgery Department Padjadjaran University-Hasan Sadikin Hospital, Bandung Indonesia ²Neurosurgery Department Keio University Hospital, Takyo Japan

E-mail: agungbudis@gmail.com

Abstract

Foramen jugularis is located at the posterior fossa, coursed by lower nerves IX, X, XI and still remains difficult for neurosurgical technique. The tumor may from the surrounding structures or the nerves itself. The preservation of lower cranial nerves which courses through JF has to be achieved since the dural layers are involved. Understanding dural layer in JF will contribute the surgical consideration to preserve cranial nerves function. Three specimens from cadavers were prepared and dissected to observe JF. Vein and artery were colored with silicon, red for artery and blue for vein. Two samples from right and one from left JF were taken and stained with masson thrihrome to examinated dural layers in JF. There are three dural layers that arachnoid, meningeal and periosteal dural which is entering to the JF and covering lower cranial nerve IX., X, and XI, as perineurium. Arachnoid is coursing until the entrance point of periosteal dura whereas the meningeal dura and arachnoid is transformed into perineurium. The tumor may arise from subarachnoid, subdural and epidural space. Subarachnoid tumor will not attach on the pars nervosa jugular foramen meanwhile subdural and epidural tumor will involve the pars nervosa and extent to extracranial. In conclusion, totalremoval tumor and preservation the lower cranial nerve IX, X, XI can be achieved in subarachnoid tumor due to there is no perineurium involvement in pars nervosa. In contrast, the subdural and epidural tumor, the dural layers have to be left the purpose of cranial nerve preservation due to perineurium has been involved to the pars nervosa JF in order to avoid lower cranial nerve complications syndrome.

Keyword: foramen, jugularis (FJ), nervus cranialis, dural layers.