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Vascular Considerations in Kawase's Approach, A Brief Review

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Mini-Review

Kawase or transpetrous approach is an extension of the middle cranial fossa approach which is involving the tentorium's divide to the incisura and as a result the posterior and middle cranial fossa can become communicated. Tumors like petroclival meningiomas or dumbbell-shaped trigeminal schwannomas which would traverse the middle fossa and some parts of the posterior fossa, can be reached by Kawase's approach as an example [1]. Very low lying basilar aneurysms for an orbitozygomatic approach, can also be reached by Kawase's approach. Ventral surface of the pons and the anterior CPA exposure, can be done with petrous pyramid's medial portion and lateral part of the clivus removal. The ICA at the posterior, the petrous ICA at the anterior, The Sixth cranial nerve at the medial and the inferior petrosal sinus at the inferior, make Kawase's approach boundaries. Petrosal nerves and the V_3 segment of the trigeminal nerve can be identified after foramen spinosum identification, coagulation of the middle meningeal artery and elevation of the dura. Superior petrosal vein entry point's ligation of the sinus, can be done during ICA exposure [2,3]. By petrous ICA mobilization towards the anterior direction, possible problem of limited access to the inferior petroclival region which is caused by the petrous ICA, can be solved. By petrous ICA area's skeletonization, thin layer of bone would be left for artery protection and it causes more safety in mobilizing the Artery. It is important for the surgeons to have enough knowledge about the surgical anatomy and pay enough attention to details while employing the transpetrous surgical approach [4,5].

Dedication

This brief review article is dedicated by the author to the great efforts of the great world-famous master in neurosurgery, Respected Prof. Dr. Takeshi Kawase who first innovated and introduced the Kawase's approach.

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