

## **Safe Entry Zones To The Pontine Portion Of The Brainstem Anatomic And Surgical Relationship**

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**Objective:** To describe the safe entry zones to the pontine portion of the brainstem through its anterior, antero-lateral and dorsal face.

**Material And Methods:** Anatomic and Surgical studies; Brainstem dissections were made on 14 anatomic specimen; 9 of them using Kingler's technique, and 5 of them have not been frozen. 23 cadaveric specimen were dissected under microsurgical technique (previously injected heads) in order to describe the surgical corridors to the zone.

**Results:** Bone and neurovascular structures were identified in each step of the different approaches that were used to reach the anterior, antero-ventral and dorsal portion of the pontine zone. Surgical hints and safe entry zones are exposed, and each one of them is described in detail.

**Outcome:** To know the brainstem anatomy and its safe entry zones thoroughly, allows us to choose the best approaches for each lesion in the pontine region, in order to reach it in a precise and safe way, and to interpret the changes produced in the normal anatomy due to the intrinsic lesions in the pons. In this way we can reduce death rate.

**Key Words:** Approaches to the brainstem, Safe Entry Zones, Pontine zone, Brainstem cavernous malformations