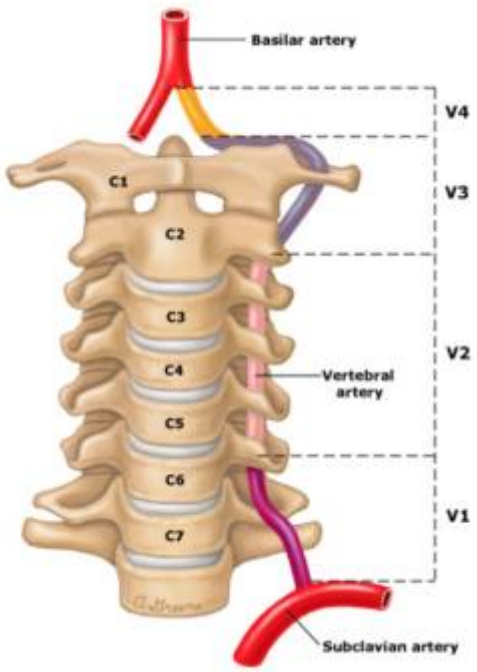
V4 vertebral artery segment

V4 vertebral artery segment pierces the dura (location somewhat variable) and immediately enters the subarachnoid space. Joins the contralateral vertebral artery (VA) at the vertebral confluens located at the lower pontine border to form the basilar artery (BA)



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Vertebral artery segment V4 (intradural): from the dura to their confluence to form the basilar artery.

V4 pierces the dura (location somewhat variable) and immediately enters the subarachnoid space. Joins the contralateral Vertebral artery at the vertebral confluence located at the lower pontine border to form the basilar artery (BA)

Ballesteros et al. [1] reported that the intracranial part of vertebral artery has a mean total length of 33.86 ± 5.59 on the left and 32.47 ± 4.8 on the right side. The most common distance between the origin of the PICA to the vertebrobasilar junction is approximately 16– 18 mm [2].

There were no statistically significant differences in the gender, however, the left artery was longer in both sexes. A review of the literature showed the diameter of the V4 from 1.5 to 4.5 mm using different measurement techniques. Unfortunately, there was no information about the location where the diameter was calculated.

These results are similar to ours and are also consistent with the conclusions of the other studies that the left V4 is dominant more often than the right artery. According to the published anatomical data,

the left VA has a wider lumen and longer segment than the contralateral one in 50–70% of individuals . Statistical differences in VA diameter between genders were not observed. However, Deng et al. reported the opposite relation for the Chinese population in which males exhibited a significantly wider arterial lumen compared to that of females [3].

1)
Ballesteros L, Forero P, Quintero I (2013) Morphological expression of the anterior spinal artery and the intracranial segment of the vertebral artery: a direct anatomic study. Rom J Morphol Embryol, 54:513-518
2)
Grand W, Budny J, Gibbson K, Sternau L, Hopkins L (1997) Microvascular surgical anatomy of the vertebrobsilar junction. Neurosurgery, 40:1219-1225
3)
Dzierżanowski J, Szarmach A, Baścik B, Czapiewski P, Muc A, Piskunowicz M, Krakowiak M, Szmuda T, Słoniewski P, Szurowska E, Winklewski PJ. Intracranial region of the vertebral artery - morphometric study in the context of clinical usefulness. Folia Morphol (Warsz). 2017 Mar 10. doi: 10.5603/FM.a2017.0021. [Epub ahead of print] PubMed PMID: 28281722.

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