All patients who underwent vertebrobasilar artery transposition were identified from the prospectively maintained database of the Vascular Neurosurgery service, and their medical records were reviewed retrospectively. The extent of arterial displacement was measured pre- and postoperatively on imaging.

Vertebrobasilar arterial transposition and macrovascular decompression was performed in 12 patients. Evolution in technique was characterized by gradual preference for the far-lateral approach, use of a sling technique with muslin wrap, and an anteromedial direction of pull on the vertebrobasilar artery with clip-assisted tethering to the clival dura. With this technique, mean lateral displacement decreased from 6.6 mm in the first half of the series to 3.8 mm in the last half of the series, and mean anterior displacement increased from 0.8 to 2.5 mm, with corresponding increases in satisfaction and relief of symptoms.

Compressive dolichoectatic pathology directed laterally into cranial nerves and posteriorly into the brainstem can be corrected with anteromedial transposition towards the clivus. Our technique accomplishes this anteromedial transposition from an inferolateral surgical approach through the vagoaccessory triangle, with sling fixation to clival dura using aneurysm clips [1].

1)
Choudhri O, Connolly ID, Lawton MT. Macrovascular Decompression of the Brainstem and Cranial Nerves: Evolution of an Anteromedial Vertebrobasilar Artery Transposition Technique. Neurosurgery. 2017 Apr 11. doi: 10.1093/neuros/nyx110. [Epub ahead of print] PubMed PMID: 28402528.