Basilar artery aneurysm case series

Twenty-nine patients with basilar artery aneurysms were operated on using one of three approaches: pterional, orbitozygomatical, and subtemporal. The efficiency of surgery and the frequency of surgical complications are analyzed in detail in relation to the data of an angiographic study and the intraoperative pattern. Three (10.3%) patients died in the postoperative period. In most cases, the pterional approach is adequate for clipping almost any aneurysm of the distal portions of the basilar artery; the use of the orbitozygomatical approach in patients with aneurysm of the same location is determined by its extent and/or adhesions with the adjacent brain structures. Current neuroimaging techniques are of the most informative value in choosing a surgical treatment policy in each specific case [1)].

The surgical therapy and results in 17 cases of basilar aneurysms are reported, extending a series of 15 reported previously. Three surgical approaches were used: subtemporal, pterional, and suboccipital. The subtemporal route was satisfactory for most lesions, although the pterional approach has advantages for upper basilar aneurysms projecting either more than 1 cm above the dorsum sellae or directly anteriorly. A low lateral-suboccipital approach is described and recommended for aneurysms of the proximal basilar trunk and vertebrobasilar junction. The recent literature regarding surgical results, classification, pathogenesis, and technical developments for management of these lesions is reviewed. Most of the morbidity resulting from surgery in the midbrain and pontine region is due to direct or indirect injury to perforating vessels. Superiorly directed bifurcation aneurysms carry the highest risk because of their association with perforating vessels. General precepts regarding size, location, patient condition, and timing of operation with respect to aneurysms of the anterior circulation hold true for aneurysms of the posterior circulation [2)].

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Eliava ShSh, Eristavi AR, Dobrovol'skiĭ GF, Beliaev AIu. [Selection of surgical approach to aneurysms of distal regions of the basilar artery]. Zh Vopr Neirokhir Im N N Burdenko. 2008 Jan-Mar;(1):37-42; discussion 42. Russian. PubMed PMID: 18488894.
2)
Wright DC, Wilson CB. Surgical treatment of basilar aneurysms. Neurosurgery. 1979 Sep;5(3):325-33. PubMed PMID: 503292.