Basilar bifurcation aneurysm treatment

Endovascular treatment has been used more frequently than microsurgical clipping, especially for posterior circulation lesions. Thus, the upcoming generation of neurosurgeons will have increasingly less access to the microsurgical treatment of such lesions [1].

The treatment remains challenging for both microsurgical and endovascular approaches. The perceived drawback of the microsurgical approach is its invasiveness leading to increased surgical morbidity. However, many high-volume centers have shown excellent clinical results with better occlusion rates compared to endovascular treatment. With endovascular therapy taking a larger role in the management of cerebral aneurysms, the future role of microsurgery for basilar apex aneurysm treatment is unclear.

Tjahjadi et al., performed a literature search to review the microsurgical and endovascular outcomes for basilar apex aneurysms.

Many studies have examined the efficacy of microsurgical and endovascular treatment for intracranial aneurysms, including large randomized trials such as ISAT and BRAT, prospective observational series such as ISUIA, and many single-center retrospective reviews. The recruitment number for posterior circulation aneurysms, specifically for basilar apex aneurysms, was limited in most prospective trials, thus failing to offer clear guidance on basilar apex aneurysm treatment. Recent single-center series report good clinical outcomes between 57-92% for surgical series and 73-96% in endovascular series. The durability of aneurysm occlusion remains superior in surgical cases. The techniques and devices in endovascular treatment have improved treatment aneurysm occlusion rates but more follow-up is needed to confirm long-term durability.

Both microsurgical and endovascular approaches should be complementing each other to treat basilar apex aneurysms. Although endovascular therapy has taken a larger role in the treatment of basilar apex aneurysms, many indications still exist for the use of microsurgery. Advancements in microsurgical techniques and good case selection will allow for acceptably low morbidity after surgical treatment while maintaining its superior durability [2].

Basilar bifurcation aneurysm endovascular treatment

see Flow Diversion for the Treatment of Basilar Bifurcation Aneurysm.

Basilar bifurcation aneurysm surgery

see Basilar bifurcation aneurysm surgery.

References

1)
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