Middle temporal gyrus approach

In 1958 Niemeyer described a selective amygdalohippocampectomy through the middle temporal gyrus\textsuperscript{1}.

This transtemporal approach transcortical approach through the Middle temporal gyrus MTG not including transsulcal approach had been reported for the removal of the trigonal tumors and explained the procedure as the incision of MTG\textsuperscript{2,3}.

Advantages

Short trajectory, early identification of the anterior choroidal artery.

Indications

Can be a first choice for vascular trigone meningioma of the non-dominant hemisphere, fed mainly by the anterior choroidal artery.

Middle temporal gyrus approach when the temporal horn of the lateral ventricle is dilated.

The MTG approach is the most widely used procedure for trigone tumors because of its short trajectory, early identification of the anterior choroidal artery.

Complications

However, the MTG incision may result in serious neurological deficits such as visual field defects, language impairment in the dominant hemisphere, or memory disturbance.

Possible mechanism of the postoperative visual field defect is due to the retraction injury of the optic radiation by the standard MTG approach.

Modification

The modified trans-MTG approach provides a safe and useful technique for trigonal tumors without postoperative visual field deterioration and affords adequate exposure of the trigonal tumor with a short trajectory\textsuperscript{4}.

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S: Superior temporal gyrus

The cortical projection of the inferior choroidal point is a reliable landmark to place the corticectomy and reach the temporal horn through a middle temporal gyrus approach 5).

1) Temporal lobe epilepsy. A Colloquium Sponsored by the National Institute of Neurological Diseases and Blindness, National Institutes of Health, in cooperation with the International League Against Epilepsy. Co-Editors: Cosimo Ajmone-Marsan, Igor Klatzo & Donald Tower. Hardcover - 1958 by Maitland & Pearce BAILEY (ed.). BALDWIN (Author