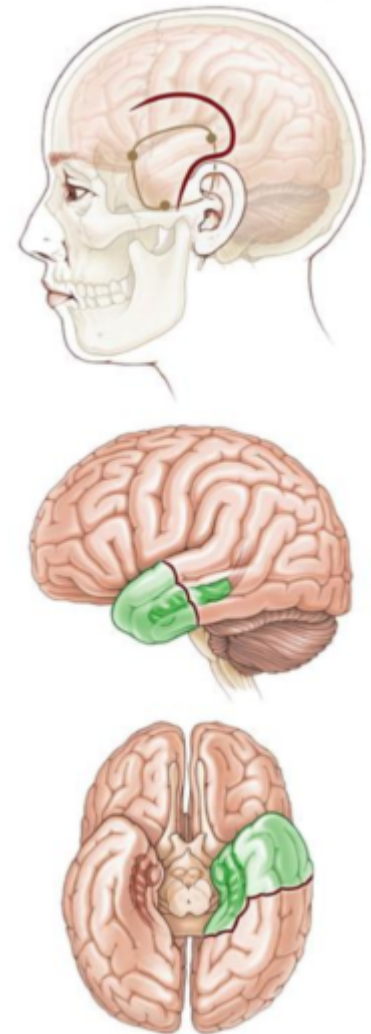


Anterior temporal lobectomy complications



Even though the mortality after [Anterior temporal lobectomy](#) (ATL) is minimal, the overall [morbidity](#) cannot be ignored. Psychiatric disturbances, [visual field defects](#), and [cognitive disorders](#) are the most common [postoperative complications](#), and should be considered during the preoperative planning and consultation ¹⁾.

Visual field defects

ATL is often complicated by [quadrantanopia](#). In some cases this can be severe enough to prohibit driving, even if a patient is free of [seizures](#). These deficits are caused by damage to [Meyers loop](#) of the [optic radiation](#), which shows considerable heterogeneity in its anterior extent. This structure cannot be distinguished using clinical [magnetic resonance imaging](#) sequences.

Optic radiation tractography by DTI could be a useful method to assess an individual patient's risk of postoperative visual deficit ²⁾. ³⁾.

van Lanen et al., developed a [score](#) method for the assessment of postoperative [visual field defects](#) after [temporal lobe epilepsy surgery](#) and assessed its feasibility for clinical use. A significant

correlation between VFD and resection size for right-sided ATL was confirmed ⁴⁾.

Cranial nerve (CN) deficits following **anterior temporal lobectomy** (ATL) are an uncommon but well-recognized complication. The usual CNs implicated in post-ATL complications include the **oculomotor nerve**, **trochlear nerve**, and **facial nerves**.

Injury to the **trigeminal nerve** leading to **neuropathic pain** are described in 2 cases following temporal lobe resections for pharmacoresistant epilepsy. The possible pathophysiological mechanisms are discussed and the microsurgical anatomy of surgically relevant structures is reviewed. ⁵⁾.

Verbal Memory after anterior temporal lobectomy

[Verbal Memory after anterior temporal lobectomy.](#)

Case reports

Dickerson et al., from the Department of Neurosurgery, University of **Mississippi Medical Center, Jackson, USA** report the third known case and first of diffuse **vasospasm**. A 48-year-old woman underwent a transcortical anterior left **temporal lobectomy**. Eleven days later, she had new-onset expressive **aphasia** with narrowing of the anterior, middle, and posterior cerebral arteries, and increased velocities via **transcranial Doppler**. She was treated with fluids, **nimodipine**, and permissive **hypertension**. At 6 months, her speech was near baseline. **Cerebral vasospasm** may represent a rare cause of **morbidity** after anterior temporal lobectomy; a **literature review** on the subject is presented ⁶⁾.

References

¹⁾

Brotis AG, Giannis T, Kapsalaki E, Dardiotis E, Fountas KN. Complications after Anterior Temporal Lobectomy for Medically Intractable Epilepsy: A Systematic Review and Meta-Analysis. *Stereotact Funct Neurosurg.* 2019 Jul 9;1-14. doi: 10.1159/000500136. [Epub ahead of print] Review. PubMed PMID: 31288240.

²⁾

Borius PY, Roux FE, Valton L, Sol JC, Lotterie JA, Berry I. Can DTI fiber tracking of the optic radiations predict visual deficit after surgery? *Clin Neurol Neurosurg.* 2014 Jul;122:87-91. doi: 10.1016/j.clineuro.2014.04.017. Epub 2014 May 5. PubMed PMID: 24908224.

³⁾

James JS, Radhakrishnan A, Thomas B, Madhusoodanan M, Kesavadas C, Abraham M, Menon R, Rathore C, Vilanilam G. Diffusion tensor imaging tractography of Meyer's loop in planning resective surgery for drug-resistant temporal lobe epilepsy. *Epilepsy Res.* 2015 Feb;110:95-104. doi: 10.1016/j.epilepsyres.2014.11.020. Epub 2014 Nov 27. PubMed PMID: 25616461.

⁴⁾

van Lanen RHGJ, Hoeberigs MC, Bauer NJC, Haeren RHL, Hoogland G, Colon A, Piersma C, Dings JTA, Schijns OEMG. Visual field deficits after epilepsy surgery: a new quantitative scoring method. *Acta Neurochir (Wien).* 2018 Jul;160(7):1325-1336. doi: 10.1007/s00701-018-3525-9. Epub 2018 Apr 5. PubMed PMID: 29623432; PubMed Central PMCID: PMC5995984.

5)

Gill I, Parrent AG, Steven DA. Trigeminal neuropathic pain as a complication of anterior temporal lobectomy: report of 2 cases. *J Neurosurg.* 2016 Apr;124(4):962-5. doi: 10.3171/2015.5.JNS15123. Epub 2015 Oct 30. PubMed PMID: 26517768.

6)

Dickerson JC, Hidalgo JA, Smalley ZS, Shiflett JM. Diffuse vasospasm after transcortical temporal lobectomy for intractable epilepsy. *Acta Neurochir (Wien).* 2018 Jul 10. doi: 10.1007/s00701-018-3606-9. [Epub ahead of print] PubMed PMID: 29987392.

From:

<https://neurosurgerywiki.com/wiki/> - **Neurosurgery Wiki**

Permanent link:

https://neurosurgerywiki.com/wiki/doku.php?id=anterior_temporal_lobectomy_complicationsLast update: **2024/06/07 02:55**