U

Uncus

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Synonyms

[Uncinate gyrus](#)

Definition

The uncus lies at the anterior and most medial portion of the temporal lobe and constitutes a large part of the primary olfactory area.

Current Knowledge

The uncus lies at the anterior and most medial portion of the parahippocampal gyrus of the temporal lobe which curves in the form of a hook. This area of the temporal lobe constitutes a large part of the primary olfactory area. Because of this and the fact that seizures commonly originate from the temporal lobe, seizures are often preceded by hallucination of disagreeable odors. This is known as an uncinate attack for which neurons of the uncus are responsible. Because

the uncus protrudes medially, in situations on increased intracranial pressure due to tumor, hemorrhage, or cerebral edema, the temporal lobe can push the uncus past the tentorium cerebelli and through the tentorial notch. This brings the uncus against the brainstem where it can compress the cranial nerves lying medial to it. Particularly at risk is the oculomotor nerve (cranial nerve III), and the first sign of its compression is dysfunction of the nerve's preganglionic parasympathetic fibers that control the ipsilateral pupil's ability to constrict in response to light. With further compression on the oculomotor nerve, there is deviation of the eye to a down and out position due to the total loss of innervation to the ocular muscles that it supplies. With continued compression on the brain stem by the uncus, the midbrain reticular formation will become distorted leading to decreased level of consciousness and ultimately coma. Pressure on the pons will be indicated as the contralateral pupil becomes dilated and non-reactive to light. For those who recover from uncal herniation, uncinate attacks are common.

See Also

- ▶ [Intracranial Pressure](#)
- ▶ [Olfaction](#)
- ▶ [Pupillary Light Response](#)
- ▶ [Seizure](#)