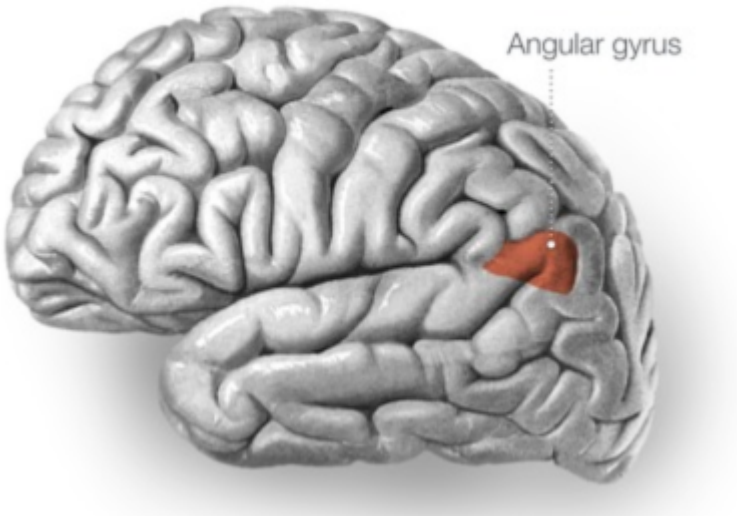
Angular gyrus



The inferior parietal lobule is composed primarily of the angular gyrus and supramarginal gyrus

The angular gyrus is a region of the brain in the parietal lobe, that lies near the superior edge of the temporal lobe, and immediately posterior to the supramarginal gyrus

Located just above the pinna, important on the dominant hemisphere as part of Wernicke's area. Note: there is significant individual variability in the location [1)].

The superior temporal sulcus terminates in the angular gyrus.

It is involved in a number of processes related to language, number processing and spatial cognition, memory retrieval, attention, and theory of mind. It is Brodmann area 39 of the human brain.

Alexia and agraphia are disorders common to the left inferior parietal lobe, including the angular gyrus and supramarginal gyrus.

Connections

Connected to the ipsilateral frontal and caudal lateral prefrontal and inferior frontal regions

Caudate

Parahippocampal gyrus and hippocampus

Precuneus and superior frontal gyrus

Supramarginal gyrus

Via the

Superior longitudinal fasciculus.

Inferior occipitofrontal fasciculus

Inferior longitudinal fasciculus

Occipitofrontal fasciculus

Local arcuate

Burks et al. identified three major types of connections of the inferior parietal lobule (IPL). (1) Short association fibers connect the supramarginal gyrus and angular gyrus, and connect both of these gyri to the superior parietal lobule [2].

Clinical significance

Damage to the angular gyrus manifests as Gerstmann syndrome. Damage may impair one or more of the below functions.

• Dysgraphia/agraphia: deficiency in the ability to write

• Dyscalculia/acalculia: difficulty in learning or comprehending mathematics

• Finger agnosia: inability to distinguish the fingers on the hand

Left-right disorientation

High Grade glioma

see Angular gyrus high grade glioma.

References

1)
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