Pars opercularis

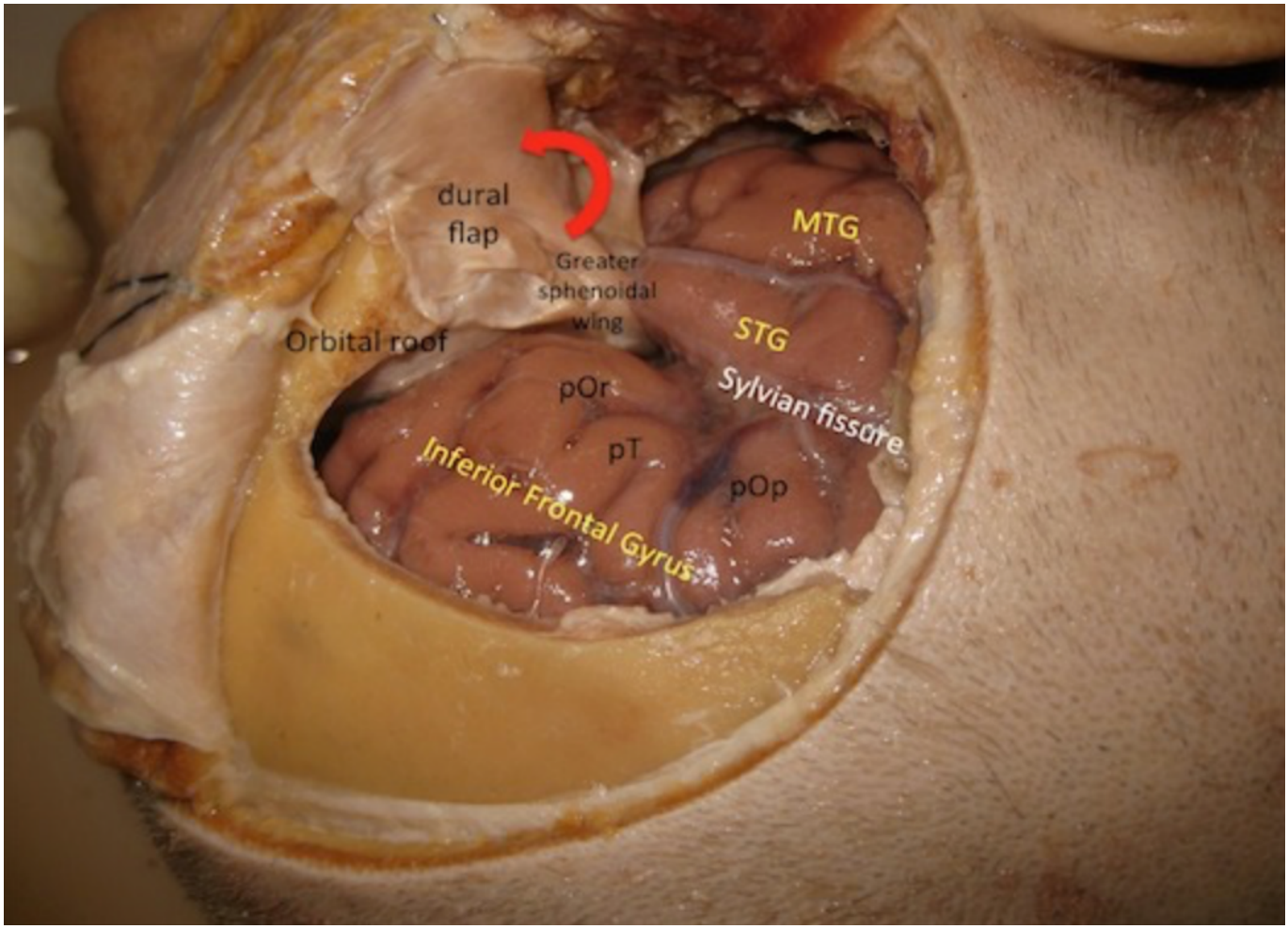
The Orbital part of inferior frontal gyrus is the part of the inferior frontal gyrus named opercularis (literally “the part that covers”) because it covers part of the insula.

The pars opercularis together with the pars triangularis form the Broca's area.

The dominant hemisphere frontal operculum may contain critical speech and language pathways, and due to these properties, patients with tumors of the opercular region may be at higher risk for postoperative speech dysfunction. However, the likelihood of incurring temporary or permanent language dysfunction is unknown.

The pars opercularis may be divided by an accessory sulcus or fuse with the posterior limb of the pars opercularis.

Functionally disrupting the pars opercularis of the right inferior frontal gyrus led a patient to automatically switch from a speaking to a singing mode of language production. Given the central role of the right pars opercularis in the inhibitory control network, Herbet et al. propose that this finding may be interpreted as possible evidence for a competitive and independent neurocognitive subnetwork devoted to the melodically intoned articulation of words (normal language-based vs singing-based) in subjects with high expertise. From a more clinical perspective, such data may have implications for awake neurosurgery, especially to preserve the quality of life for singers [1)].



The bone flap has been removed and the dura mater has been opened as a flap pediculated towards the greater sphenoid wing previously roungered to improve parasellar visualization. Sylvian fissure,

Inferior frontal gyrus, Superior temporal gyrus and Middle temporal gyrus are exposed. Three pars of parasylvian inferior frontal gyrus must be distinguished: pars orbitalis (pOr) in relation to the orbital roof; pars triangularis (pT) the widest area of sylvian fissure (good place for start opening of sylvian fissure); pars opercularis (pOp) where Broca's Area is located.

1)

Herbet G, Lafargue G, Almairac F, Moritz-Gasser S, Bonnetblanc F, Duffau H. Disrupting the right pars opercularis with electrical stimulation frees the song: case report. J Neurosurg. 2015 Jul 3:1-4. [Epub ahead of print] PubMed PMID: 26140496.