

SLT role in Awake Craniotomy

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Does my bum look big in scrubs!?



What we did

- SLT / Neuropsychology project (2013) – Explored the role of SLT and Neuropsychology in patients with Low Grade Gliomas
- Explored/Developed Awake Craniotomy Pathway
- Supported 3/4 pre-intra-post operatively
- Networking / UK Forum (protocol used is in line with other major sites involved in awake craniotomy)



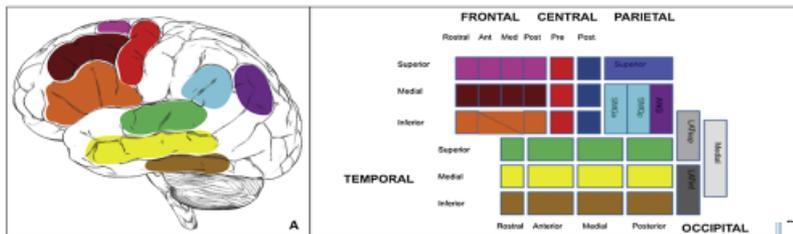
Why we did it



- Awake Craniotomy: Technique of choice for certain Neurosurgical procedures, including excision of lesions from eloquent cortical areas and procedures for epilepsy and movement disorders
- Safe, well tolerated procedure, careful patient selection is the key to success
- Define SLT Role within pathway:
 - Pre/Post op assessment (identifying appropriate patients for the procedure i.e. difficult using those with cognitive changes)
 - Intra op cortical mapping/continuous monitoring
 - Better patient outcomes as more accurate assessment during resection (historically only automatic speech used)
 - Additional support for patient/relatives
 - Signpost rehab/ongoing support mechanisms

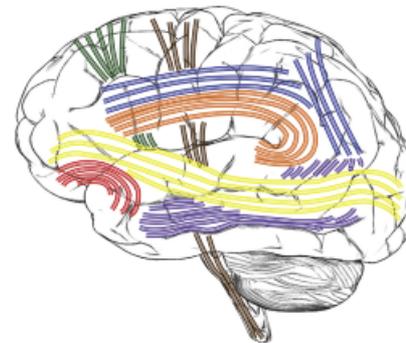
How we did it

Cortical Regions



Frontal Regions	Function (s)	Intra-operative tasks from DuLIP
Inferior frontal gyrus	Articulatory processing /syntax/ (writing)	Verbal DDK, repetition, verb generation, action naming
Posterior midfrontal gyrus	Action naming/(writing)	Action Naming
Supplementary motor area (posterior superior frontal gyrus)	Language Initiation	Sentence completion (closed and broad context), fluency
Precentral gyrus	Motor network	Repetition, Verbal DDK

Subcortical Pathways



Subcortical pathways	Function(s)	Intraoperative language tasks from DuLIP
Subcallosal fascicle	Initiation of speech	Fluency, sentence completion
Superior longitudinal fascicle (arcuate fascicle)	Articulatory processing/ Phonology	Verbal diadochokinesis, repetition/ phonological odd word out
Inferior fronto-occipital fascicle	Semantics, reading, judgment	Semantic association, semantic odd word/picture out, semantic judgment

What were the outcomes?



- Mr Goetz (Neurosurgeon) emailed a few comments....
 - “I felt that your pre-assessment and intra-operative testing were essential to this case and have contributed to his good outcome.”
 - “There is a strong case to argue SLT involvement for all awakes as you know, and I am sure Naomi Goodwin (anaesthetist) would agree.”
 - “I mentioned this to the WHSCC commissioner who visited today, as one of the resource gaps for the LGGC service. I have provided your names so she may be in touch. We will continue to discuss this internally.”
- Explore potential to create a Neuro-Oncology post at UHW to support with Awake Craniotomy procedures and support MDT management (Neuro-oncology Peer Review 2016)
- Ongoing changes to LGG procedures in Cardiff and Vale i.e. new consultant neuro-surgeons with new ideas, use of fluorescent dye to more accurately localize tumours.
- This is only the beginning and our work to date has provided just a snapshot of the potential within neuro-oncology.