TRANSCRANIAL MAGNETIC STIMULATION

CONTRAINDICATIONS TO TREATMENT

Metal objects in the head or neck area e.g. foreign bodies, post-surgical implants
Pregnancy
Increased inter-cranial pressure

SIDE-EFFECTS

Headaches, pain/discomfort at the site of stimulation, neck pain, toothache
No severe adverse events have been reported

BENEFITS

Long lasting treatment effects providing improvements in hand function
Greater improvements have been seen with TMS that is paired with task oriented physiotherapy than from physiotherapy alone
Enhances the functionality of the area of the brain affected by stroke

REQUIREMENT FOR SUITABILITY OF TREATMENT

Confirmed diagnosis of stroke
Suitability assessment for MRI scan and the TMS treatment
An MRI scan within 3 weeks of treatment commencement according to the requirement of the system for navigation of the treatment
Above 18 years of age

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REFERENCES

SAFETY OF NAVIGATED TMS
- 199 subjects
- Less than 3000 NBT delivery sessions
- No device related Serious Adverse Events
- NBT therapy well tolerated
- Independent Data and Safety Monitoring Board identified no safety issues

Rossi (et al 2009) reviewed number of studies in a review (298 subjects) and concluded that risk of epilepsy/seizures is extremely rare which is considered to be the most serious complication of TMS.

NAVIGATED TRANSCRANIAL MAGNETIC STIMULATION FOR STROKE REHABILITATION
- Non-invasive navigated transcranial magnetic stimulation (TMS)
- The electric field modelled and targeted with MRI-based 3D navigation system
- TMS offers a safe and effective non-invasive treatment for stroke rehabilitation
- A stroke may cause paralysis of an upper limb, but with use of this technology we can target the affected area with Navigated Brain Stimulation to enhance its functionality
- A large number of research trials are being conducted to examine interventions that improve the recovery of the affected upper limb after a stroke. Assistive technology use like TMS has a growing evidence base and is showing additional benefit when compared to standard treatment

PROTOCOL FOR THIS TREATMENT

MRI
- Each patient requires an MRI of the brain within 3 weeks of commencing treatment

INITIAL CONSULTATION
- Meet with consultant to discuss proposed treatment and answer any questions
- Discuss all relevant safety issues relating to the health of the person to receive treatment
- Determine the area of the brain to be stimulated and design a bespoke treatment plan of TMS therapy based on the information gained from the client and their medical history
- Discuss the aims of the treatment and set client focused goals
- Gain consent for treatment and discuss the number of treatment sessions required
- Inform client of how data will be used to improve TMS therapy and gain consent for this
- Set a diary for treatment and therapy sessions

TREATMENT SESSIONS
- 3 treatment sessions per week for 6 weeks
- Each session of Navigated TMS will last for 17 minutes
- Following each session of TMS 1-2 hours of client specific, goal oriented therapy will be undertaken with a member of our dedicated therapy team