the doctor of any history of a seizure disorder, for it may influence the risk of developing a seizure during treatment.

There are no known adverse cognitive (thinking and memory) effects associated with TMS therapy. Also no known long-term adverse effects have been reported with TMS. However, as a relatively new treatment, TMS therapy may have unforeseen risks in the long-term that are currently unknown.

Pregnancy

The risks of exposure to TMS in pregnancy are unknown. In case of women of childbearing capacity, they may be asked to take a pregnancy test before treatment.

Metal Implants

TMS should not be carried out on anyone who has non-removable magnetic-sensitive metal in the head or within 12 inches of the magnetic coil. Failure to inform the doctor of any metal implant could result in serious injury or death.

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Transcranial Magnetic Stimulation (TMS)

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What is TMS?

Transcranial Magnetic Stimulation (TMS) is a brain stimulation technique that relies on the generation of brief magnetic fields using an insulated coil that is placed over the scalp. These magnetic fields are of the same type and strength as those used in magnetic resonance imaging (MRI) machines. The magnetic pulses generate a weak electrical current in the brain that briefly activates neural circuits at the stimulation site. TMS has been shown to be a safe and well-tolerated procedure that can be an effective treatment for neuro-rehabilitation. The potential benefit of TMS includes possible improvements in the symptoms of neurological deficits. As in all forms of medical treatment, not all patients respond equally well to TMS. Some patients may recover quickly, while in others a brief recovery is followed by possible relapse. Some may even fail to respond to TMS therapy at all.

Approved Indications for TMS:

- Major depressive disorder
- Obsessive-compulsive disorder

Research has also shown the effectiveness of the treatment for many common neurological and other disorders:

- Stroke
- Parkinson's disease
- Dementia
- Spasticity
- Smoking cessation
- Migraine headache
- Anxiety disorder

Doctor will explain to patients the reasons for TMS in specific cases as well its risks and benefits.

Procedure

TMS therapy involves a series of treatments. For each TMS session, you will be brought into a specially equipped room in the Hospital. Before the TMS procedure begins, you will be asked to remove any metal or magnetic-sensitive objects (e.g. jewellery, keys and credit cards). As TMS produces a loud clicking sound with each pulse, you may also be offered earplugs for comfort and safety. During the procedure, you may also feel a tapping sensation on the scalp. Each treatment session typically lasts 20 to 45 minutes.

If you experience any discomfort, please report to staff and you may request termination of the procedure at any time.

As anaesthesia or sedation is not required for TMS, you will stay awake and alert during the entire procedure.

Number of Treatments

The exact number of treatments cannot be predicted beforehand. It depends on the patient's condition, response to treatment, and the medical judgment of doctor. TMS treatments are usually administered two to three times per week, but the frequency of treatments may vary depending on each patient's needs. Typically, patients who respond to TMS will experience results by the fourth to sixth week of treatment. However, some patients may experience results earlier and others may take longer to take effect. Patients may choose to discontinue the treatments at any time.

Risks

As in any medical treatment, TMS carries a risk of side effects. However, TMS is generally well-tolerated. Only a small percentage of patients discontinue treatment because of side effects.

During the treatment, you may experience tapping, facial twitching, or painful sensations at the treatment site while the magnetic coil is turned on. These types of sensations are reported by about one-third of patients. You should inform staff if they occur. The treatment staff may adjust the stimulation settings or make changes to the location of the coil to enhance comfort during treatment. In addition, about half of patients treated with TMS experience headaches. Both the discomfort and headaches tend to improve over time, and the headaches generally respond very well to pain medications.

As the TMS device produces a loud click with each pulse, you can wear earplugs during treatment to minimise the risk of hearing loss. There have been no reported cases of permanent hearing loss when properly functioning hearing protection is available.

The most serious known risk of TMS is seizure. Despite a few case reports of seizures with the use of the current type of TMS devices, this risk is extremely small. Also no seizures have been observed while this particular TMS device is in use. You should inform