** Acharya’s N.R. School of nursing **

Soladevanahalli, Bangalore -90

**Somatic Therapies**

**PHOTO THERAPY**

* Exposing a patient to artificial therapeutic lighting about 5 to 20 times brighter than indoor lighting.
* Patient sits with eyes open, about 3 feet away from and at eye level with a set of broad spectrum fluorescent bulbs designed to produce the intensity and colour composition of outdoor day light.
* Light visor- a device shaped like base ball cap and worn on the head, with the light contained in a visor portion suspended above and in front of the eyes.
* Light therapy administered in the morning is very effective.
* The amount of light to which the person exposed depends on the intensity of the light source and the duration of the exposure.
* Patients feel relief after 3 to 5 days; however, they relapse equally rapidly if light treatment is stopped.
* Initial therapy sessions should be supervised by a professional with experience and training.

**Indications**

* 60 to 90% response rate in patients with well-documented, non-psychotic winter depression or seasonal affective disorder.
* October to April
* Mild condition- winter blues
* Sadness, irritability, increased appetite, carbohydrate carving, weight gain, hypersomnia & decreased energy

**Symptoms Responders**

* Hypersomnia
* Reverse diurnal variation (Evening worse)
* Carbohydrate craving

**Symptoms Non-Responders**

Melancholic symptoms including:

* Retardation
* Suicidality
* Depersonalization
* Typical diurnal variation (morning worse)
* Anxiety
* Appetite loss
* Feelings of guilt
* Early and late insomnia

**MOA**

* Based on the biological rhythms, particularly those related to light and darkness.
* Therapeutic effect appears primarily by the eyes not by the skin.
* Some people may have the neuro-chemical vulnerability, r/t melatonin, that causes to develop SAD in the absence of exposure to envt. Light.

**Adverse Effects**

* Eye strain & headache
* Irritability
* Insomnia
* Fatigue
* Nausea
* Dryness of the eyes, nasal passages & sinuses

**TRANSCRANIAL MAGNETIC STIMULATION**

* It is non invasive procedure in which a changing magnetic field is introduced in the brain to influence the brains activity.
* The field is generated by passing a large electric current through a wire stimulation coil over a period.
* The insulated coil is placed on or close to a specific area of the patients head, allowing the magnetic field to pass through the skull and into the target areas of the brain.
* When the magnetic stimulus is administered as a train of the multiple stimuli per second, it is called REPETITIVE TRANS CRANIAL MAGNETIC STIMULATION (rTMS)

**Indications**

* Mood disorders
* Depressed pt’s have reduced perfusion in the prefrontal cortex area of the brain, especially on the left side.
* Depressed pt’s- rTMS left prefrontal cortex
* Manic pt’s- rTMS right prefrontal cortex

**MOA**

* Neuron is exposed to the a changing magnetic field, a second electric field is activated within the material.
* This activation may result in neuro-chemical changes based on alterations in gene expression, such as increase in some receptor binding

**Adverse effects**

* Seizures
* Headaches
* Tinnitus
* Transient hearing loss

**VAGUS NERVE STIMULATION**

* VNS involves surgically implanting a small generator (pocket watch-sized) into the patients chest.
* An electrode is threaded subcutaneously from the generator to the vagus nerve on the left side of the clients neck
* The end of the electrode is wrapped around the nerve.
* Once implanted, the generator is programmed via computer for the frequency and intensity of the stimulus.

**Indications**

* Depression
* Anxiety disorders
* Obesity
* Chronic pain syndromes
* Addictions
* Sleep disorders

**MOA**

* Lt.vagus nerve composed of afferent sensory fibers
* These fibers connect to brain stem and deep brain structures.
* Stimulation to these fibres changes the structures and also affect the concentration of some neuro transmitters such as GABA & Glutamate.

**Adverse effects**

* Hoarseness
* Throat pain
* Neck pain
* Headache
* Shortness of breathing
* Infections

**PSYCHO SURGERY**

* It is a controversial brain surgery, is performed to provide relief from mental disorders that have been resistant to other treatment forms.
* Egas Moniz, a Portuguese neurologist
* 1935- 20 institutionalized pt’s performed surgery and 14 patients showed improvement.
* Termed psycho surgery
* 1949- Nobel prize

**Indications**

* Pt’s with severe, chronic, disabling and treatment-refractory psychiatric disorders should be considered for psycho surgery.
* Depression and anxiety
* Depression- related pain
* Obsessive compulsive disorders
* Aggression