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**Mid-Term Assignment/Paper (spring -020)**

**Neurological Physical Therapy**

**DPT 8th Semester**

**Instructor: Dr. M.Jaffar**

**Time: 48-hours Max Marks: 30**

**Q1**. What is difference between Parkinson and Parkinsonism?

Ans.

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| PARKINSON | PARKINSONISM |
| Parkinson occur when there is the loss or depletion of dopamine neuron. | Any lesion occur in the basal ganglia due to any vascular injury is known as parkinsonism. |
| It is the one form of Parkinsonism. But symptoms occur . | It is characterized by the clinical menifistation of resting tremor ,brdykinesia rigidity and postural instability. |
| It is a neurodegenerative disease . | It is a neurodegenerative disease. |
| It is an idiopathic. But gene mutation and environmental factors play a role to cause this diease. | It is cause due to many related diseases i.e parkinson’s disease ,vascular parkinsonism and atypical parkinson’s syndrome. |

Write down primary and secondary clinical feature of Parkinson disease also explain physical therapy management of Parkinson patients.

 CLINICAL FEATURE OF PARKINSON DISEASE

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| PRIMARY  | SECONDARY |
| Tremor (resting tremor) involve involuntary shaking from muscle relaxation OR contraction. | Micrographia ,abnormally small or cramped handwriting. |
| Rigidity which is cause due to stiff muscle and patient will experience jerky movements. | Speech problems involve slurred speech or voice softened. |
| Bradykinesia that is slow movement in which the patient will feel weakness ,fatigue and inability to move the limb.it can occur in just one limb or whole side of the body. | Psychological problems may involve sleep disturbance ,depression ,anxiety ,dementia,confusion and hallucination. |
| Postural instability in which the patient feel unbalance and unstable in their feet due to which increased falling chance. | Sexual dysfunction can cause erectile dysfunction decrease sex drive or pain during intercourse. |
| Abnormal gait in which the patient will follow slow shuffling gait or short steps. | Sensory problems may include burning sensation,numbness ,pain and can be experience high temperature. |
| Masked face ,patient’s face would shift to one side . | Autonomic disturbances include urinary urgency,constipation ,hypotention ,bowel and bladder problems and sweating abnormalities. |

PHYSICAL THERAPY MANAGEMENT OF PARKINSON’S PATIENT

* STRETCHING EXERCISES for all weak muscles i.e back extensor ,neck extensor, hip extensor and knee extensor.
* STRETCHING EXERCISES for all shortened muscles i.e trunk flexors ,neck flexors ,hip flexors and knee flexors.
* HYDROTHERAPY for relaxation strengthening and balance.
* BALANCED TRAINING emphasize dynamic stability tasks i.e weight shifts ,reaching ,axial rotation of the head and trunk.
* Seated activities include sitting on a therapy ball.
* Balance can be introduced by varying arm position i.e arms out to side ,arms folded across chair ,varying foot or leg position .
* Voluntary movements include arm clapping , arms overhead ,single leg raises, head and trunk rotations.
* Stepping or marching in place or functional reach.
* MOVEMENT TRAINING may include lengthen stride broaden base of support ,increased speed.
* Use visual and auditory cues for attention improve during a movement task.
* Deep breathing exercises for the improvement of chest wall mobility and vital capacity.
* Aerobic exercises.
* MICROGRAPHIA MANAGEMENT include usage of weighted pens ,use of type writer and keyboard typing, wrapping of tape for additional grip.
* Practice of facial expression i.e smiling nose wrinkling surprise or furrowing for masked facial management.
* Speech therapy to improve slurred speech.

**Q.2** All body movements are controlled by brain which is also called control center , brain have different parts and different lobs , elaborate different lobes in brain and also **explain functions of different lobes.**

**Ans. DIFFERENT LOBES OF BRAIN**

1. **Frontal Lobe**
2. **Parietal Lobe**
3. **Temporal Lobe**
4. **Occipital Lobe**

 **FUNCTIONS OF DIFFERENT LOBES**

1. **FRONTAL LOBE:**

 **The functions of frontal lobe include emotional regulation .planning ,reasoning and problem solving.**

 **11.PARIETAL LOBE:**

 **The function of parietal lobe include the integration of sensory information occur ,that is touch ,pain ,pressure and temperature.**

**Parietal lobe function can be checked by two point discrimination.**

**111.TEMPORAL LOBE :**

 **It is use for the processing of sensor information . it include the area for hearing and recognizing languages and also important for forming memories. It is also use for visual processing.it contains the hippocampus which is use for memory ,learning and emotions.**

**1V. OCCIPITAL LOBE :**

 **It is the major visual processing center in the brain, use for visual perception, local orientation and shape perception.**

**Q.3** Explain stroke and types of stroke.

 Ans. STROKE:

 It is a neurological condition characterized by the blockage of blood vessels to decrease the blood and oxygen to the brain.

It can cause brain damage ,long term disability and even death.

 TYPES OF STROKE

Stroke are divided into three main types:

1. Trans ischemic attack (TIA)
2. Ischemic stroke
3. Hemorrhagic stroke
* TRANS ISCHEMIC ATTACK:

 Also known as ministroke , same as like a stroke but there is a temporary blockage of blood supply to the brain and can cause temporary damage to brain tissue.

* ISCHEMIC STROKE :

 It is a type of stroke which is occur as a result of blockage or leaking of blood vessels that supply to the brain.

* HEMORRHAGIC STROKE :

 Also called intracerebral hemorrhage , which is occur due to the rupture or bursting of weak vessels in the brain to cause bleeding in the surrounding brain tissue and interrupt the brain function.

1. What are neurological complications and associated conditions in stroke?

NEUROLOGICAL COMPLICATION IN STROKE :

1. BLOOD CLOTS OR DEEP VEIN :

 Deep vein thrombosis is the most common complication in stroke in which there is a thrombus formation or blood clot form in the legs causes swelling redness or pain in the legs.

 2. DEPRESSION AND OTHER MOOD CHANGES :

 With stroke the patient experience sleeping difficulty ,irritability, apathy and uncontrolled expressions of motions.

 3. APHASIA AND OTHER SPEECH DISORDER :

 When stroke occur their will be impairment in the expression and understanding of language .Aphasia occur as a result of brain damage, reading and writing difficulties also occur with stroke.

 4. INVOLUNTARY MUSCLE TIGHTENING OR SPASTICITY :

 Patient experience muscle tightness and pain in legs or arms muscles .

 5. CHRONIC HEADACHES :

 Chronic headache mostly occur with hemorrhagic stroke because the blood from brain may irritate the brain,

ASSOCIATED CONDITIONS IN STROKE :

 After stroke the patient experience certain associated factors i.e

* They will have difficulty swallowing.
* Experience urinary or bowel incontinence
* Feeling of fatigue
* Stroke patient will feel pain ,numbness and burning sensation .
* There will be weakness ,paralysis and balance or coordination problem
* Also experience inattention to one side of the body ,which is called neglect.
1. Write down the Physical therapy interventions in stroke patients.

* PHYSICAL THERAPY INTERVENTION FOR STROKE PATIENT :
* Physical therapy help the patient to relearn the motor activities such as walking ,standing ,sitting ,lying down.
* Muscle strenthening exercises for both affected and unaffected limbs for mobility.
* Over ground gait training for the improvement of dynamic balance and ensure safe ambulation in the home.
* Patients first have to practice trunk and head control , sit to stand balance , and then stepping.
* Patient and family education is important about the patient care and for their recovery .
* Teaching of alternatives or compensatory methods for performing functional tasks and activities i.e gate training education, practice of activities of daily living and community activities.
* Intervention to improve movement control.
* Intervention to improve aerobic capacity and endurance.
* Intervention to manage spasticty.
* Intervention to improve strength.
* To improve movement control.
* To improve upper and lower extremity function.
* Intervention to improve unilateral neglect .
* To improve sensory function.
* To improve gate and locomotion .