**Mid Term Assignment\Paper**

**(Spring 2020)**

**Neurological Physical Therapy**

**DPT 8th Semester**

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**Q1. What is the difference between Parkinson and Parkinsonism? Down primary and secondary clinical feature of Parkinson disease also explain Physical Therapy management of Parkinson patients?**

**Ans: (A) Difference between Parkinson and Parkinsonism:**

**Parkinson Disease:**

 **Parkinson also known as shaking palsy is a degenerative disorder of the center nervous system (CNS) that manly affect the motors system. It’s occurs due to dopamine depletion in basal ganglia of brain.**

**Basal ganglia:**

 **A group of sub cortical nuclei, which are located it the base of fore brain and top of the mid brain. It controls voluntary motor movements**

**Parkinsonism**

**parkinsonism can be defined as chronic neurological syndrome due to lesion in basal ganglia that results in tremors, rigidity, bradikinesia ,postural problems.**

**Major difference**

**The major diffrerence between Parkinson and parkinsonism is the lesion of basal ganglia, in Parkinson there is deficiency of dopamine while in parkinsonism there is lesion in basal ganglia**

***B.clinical features of PD***

***1 primary 2 seycndry***

***Primary . dopaminergic deficiency in patient with pd causes abnormalities of movement ,behavior, learning and emotions***

***1.resting tremors =tremors are involuntary, oscillatory movements seen in fingers, arms , head , jaws .tremors are aggravate by emotional and physical stress .first unilateral than become generalized***

***2.bradikinesia =slowness of movements***

***3.rigidity***

***4.postural abnormalities =stooped flexed postural***

***5.fall= due to poor balance patients have fear of fall***

***6.muscle stiffness***

***7.maskedface=expression less pace .facial muscle stiffness causes masked like facial appearance***

***8.gait problem=shuffling;pd patient take small step and arm do not swing***

***Festinating ;some time patients take short stepped gait with stooped posture due to displaced centre of gravity.***

***Secondary c. features***

***These are the problems which develops later***

***These includes , psychological problems, personality problems, sensory problems, speech problems etc.***

**1 psycological problem.**

**Dementia , hallucinations or delusions commonly occur .it ranges from minor hallucination to full blown vivid formed visual hallucination and paranoid ideation**

**Fear**

**Anxity**

**And depression**

**2 sleep disturbance**

***Insomnia***

***Disturb sleep cycle , patient sleeps in daytime while wake in sleep at night mean patient can sleep properly***

***3 Autonomic problems;***

***Standing hypotension , bowel and bladder problem, dryness of skin***

***4 micrographia., patient writes very small if you ask patient to write something he will write small***

***5sensory problem***

***Patient feels pain , numbness and parasthesia . burning sensation***

***6 speech problem***

***Difficulty in speaking ,dysarthria***

***7 cough***

***8 forward head because of abnormal posture***

***9slivary dropping.***

**C.Physical therapy management of Parkinson patients**

***Goals***

***Maximize patient inndepence***

***Regain function***

 ***Manimize seconadry complications***

***Manimize deformity***

***Prevent fall***

***Modes***

***Exercises***

***Assistive devices***

***Postural education***

***Yoga***

***Hydrotheraphy***

***Exercises : stretching exercises, strengtheng exercises, balance exercises, relaxation exercises***

***These exercises improve motor symptoms , mental and emotional functions and improve quality of life***

***For rigidity: use generalized relaxation technique such as gentle rocking it decreases excessive muscle tension***

***For tremors : use fist making , avoid noise , complete relaxation.***

***For speech: the most common technique used for speech problem associated with PD is lee silverman voice treatment, it may improve speech***

***For masked face: use mirror therapy and practice facial expressions like smiling , nose wrinkling etc***

***For Micrographia :use weighted pens ,keyboard or typewriter in later stages.***

***For gait problem: perform targeted movements, walking on cue cards, always walk with arm swing in a marching style.***

***For posture : wall and corner posh ups , leaning forward with palms towards wall with arm over head and feet away from wall.***

***Assistive devices: use one point can do not tripods or quad canes***

***Prevention of fall: to prevent fall teach patient to use u.turn and clock turn technique in walking.***

**Q2. All body Movements are controlled by brain which is also called controlled center, brain have different parts and different lobs, elaborate different lobs brain and also explain function of different lobs?**

**Ans:**

**BRAIN:**

**Brain is of the largest , complex and most important organ in human body. It controls all body functions .**

**Brain lobes: brain is divided in different lobs they are**

**Frontal lobe**

**Temporal lobe**

**Parietal lobe**

**Occipital lobe**

**Cerebellum**

**Brain steam**

**FRONTAL LOBE:**

**Frontal lobe is located in front of brain, it is very larg and have many functions. including emotional regulation, planning , reasoning and problem solving , and controls voluntary movements.**

**TEMPORAL LOBE:**

**Located on side of brain just above ear. seperated from frontal lobe by the lateral fissure**

**Function : one of most important function is to help prosses and understand sound such as music and speech other includes managing emotions , face recognition . also play an important role in memory ,hearing , object perception .**

**PERITAL LOBE:**

**Located behind the frontal lobe and above temporal lobe .**

**Function :one of the main function to allow us to make sense of thing we touch , movement control, manipulation of objects ..**

**OCCIPITAL LOBE:**

 **located at back of brain**

**Function: important role in vision, local orientation shape perception**

**CEREBELLUM:**

 **cerebellum controls balance, coordination and reflex motor acts**

**BRAIN STEAM:**

 **connect cerebrum and cerebellum to spinal cord . controls breathing, hr , temp , cough , vomiting, swallowing.**

**Q3. Explain Stroke and types of strokes?**

1. **What are Neurological complications and associated condition in stroke?**
2. **Write down the physical therapy intervention in stroke patient?**

**Ans:**

**STROKE:**

 **Stroke also known as cerebrovescular accident is the sudden loss of neurological function caused by an interruption of blood flow to thebrain. Without blood flow brain cells starts to die. This causes serious symptoms , lasting diability and even death.**

**Changes occour in the level of consciousness and impairment of sensory, motor, cognitive , and language functions.**

**SYMPTOMS OF STROKE: face drop , arm weakness , speech difficulty ,**

**Types of stroke:**

**There are two main types of stroke ,**

**Ischemic and hemorrhagic stroke**

 **A ischemic stroke:**

**Ischemic stroke occur due to decrease / inadequate blood flow to the brain. It may be embolic or thrombotic.**

**Embolic: a blood clot travels from another part of body to brain**

**Thrombotic: caused by a colt forming in blood vessels of brain**

**Some other causes are hypotension , DM etc**

**B. HEMORRHAGIC STROKE:**

**Approximately 15 percent of all strokes. results when a blood vessels Iin brain rupture or break .caused by HTN , aneurysm, bleeding disorder , head injury.**

**Aneurysm: causes a portion of the weakened blood vessel to balloon outward and some time rupture**

**HTN: increase blood flow may also rapture blood vessel in brain.**

**B.. NEUROLOGICAL COMPLICATIONS AND ASSOSIATED CONDITIONS IN STROKE:**

 **A. speech difficulty: stroke may effect the area of brain which controls speech , swallowing .**

**B . sensory deficit : stroke can cause numbness and decreased sensation .**

**C. motor deficict: stroke causes muscle paralysis because brain controls movements so stroke also affect that area which controls movements**

**D . behavior changes: stroke can contribute to depression or anxiety .**

**E. bladder and bowl dysfunction .**

**F .dvt**

**G. dysphagia**

**H. altered consciousness**

**I. alreted emotions: patient worry about his condition, some time cry**

**J. osteoporosis and fracture : due to immobility patient,s bones becomes weak so the chances of osteoporosis and fracture increases**

**Seizures**

**Pulmonary dysfunction: common in bedridden patient.**

 **C . physical therapy intervention in stroke patients :**

**Treatment of stroke is multi displinary . physical therapy play very important role in the management of stroke. Following are some physical therapy interventions.**

 **Strategies to improve motor learning**

**INTERVENTION TO IMPROVE SENSORY FUNCTIONS**

**Intervention to improve unilateral neglect :**

 **stroke patient neglects one side, the affected side. To improve this neglect different technique can be used like mirror therapy, cimt**

**Intervention to improve strength**

**Strengthen exercises for upper and lower limb**

**Intervention to manage spasticity**

**Intervention to improve movement control**

**Strategies to improve upper extremity functions**

**Different activities can be performed on patient to improve functions , mirror therapy and cimt are very useful to improve function**

**Strategies to improve lower extremity function**

**Intervention to improve postural control and balance**

**Correct posture and positions . use balance bar to improve balance**

**Interventions to improve gait**

**THE END…..**