**Assignment for Viva (Spring 2020) (DPT 6th Semester)**

**Course Title: Pathology and Microbiology-ll Instructor: Dr. Maria Feroze**

**Note:**

* **Upload your assignment on SIC till 10th July 11:59 p.m.**
* **Copying the content from net or book is not allowed.**
* **Write the assignment in MS word/pdf.**

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Q1. What physical therapy treatment should be given to a woman who has osteoporosis?

Answer

**Physical therapy Treatment of osteoporosis**

Optimizing posture and body alignment. This is especially important before we start to load the body through strength training.Core stabilization.Breathing technique.Safety tips for exercising

Reviewing all aspects of daily activities that can place the spine at risk, this includes extracurricular.activities such as yoga or pilates.

Safe and effective flexibility exercises.

Safe and effective core strengthening exercises.

Individualized strength training that incorporates all the elements needed to stimulate osteogenesis.

Balance training and fall prevention.

Cardiovascular recommendations based on their fracture risk.

I) weight bearing exercise :

\_ such as walking or hopping maintain or improve the density or bone.

\_ strengthening exercises with the help of resistance band also maintain the density.

\_ these exercise improve the individually overall physical function and postural control e.g tai chi, yoga.

ii) postural exercises :

\_ it include extension exercise.

\_ strengthening the extensor muscles will promote improved posture and also improved the balance.

\_ applying compressive forces to the vertebrate can contribute to compression fracture.

III) Back pain :

\_ physical therapist may treat patients with osteoprosis for back pain.

\_ Agility training, resistance training and stretching have all been show to decrease back pain.

Q2. What is the difference between osteoporosis, osteomalacia and osteomyelitis?

Answer

**Osteoporosis**:

Osteoporosis is a condition which laterally mean porous bone is a disease which quality and density of bone are reduced .as bones become more fragile and porous the risk of fracture is highly increased .the loss of bones occure progressively and silently in this condition often there are no symptoms until the first fracture occurrs

**Causes:-**

- low Estrogen in Women

-low testosterone in man

- Other Hormone Imbalances such GH , parathyroid Harmones,

-lack of calcium

-lack of Vitamin-D

- Sedentary Lifestyle

-Smoking

-Medications such is corticosteroids also known is cartisone& hydrocortisone, glucocorticoid, Prednisone,

-Too Much Alcohol

**-Sign and Symptoms**:

usually no symptoms in early stages there for also known as silent disease

-due to spinal compression there may be back pain

-Symptoms of severe osteoporosis can include a fracture from a fall or even from a strong cough or sneezing. They can also include neck or back pain, or loss of height. Neck or back pain or loss of height can be caused by a compression fracture.

-tenderness or bone pain

-joint pain

-farcture with little or no trauma

-loss of height over time

-low back or neck pain due to fracture

-stooped posture

**Osteomyelitis**:

Osteomyelitis is an infection in a bone. Infections can reach a bone by traveling through the bloodstream or spreading from nearby tissue. Infections can also begin in the bone itself if an injury exposes the bone to germs.

**Causes**:-

-In most cases, a bacteria called Staphylococcus aureus, a type of staph bacteria, causes osteomyelitis.

-Certain chronic conditions like diabetes may increase your risk for osteomyelitis.

**Sign and symptoms**:-

-Fever, irritability, fatigue

Nausea

Tenderness, redness, and warmth in the area of the infection

Swelling around the affected bone

Lost range of motion

Osteomyelitis in the vertebrae makes itself known through severe back pain, especially at night.

**Osteomalacia**

Osteomalacia is a disease characterized by the softening of the bones caused by impaired bone metabolism primarily due to inadequate levels of available phosphate, calcium, and vitamin D, or because of resorption of calcium. The impairment of bone metabolism causes inadequate bone mineralization.

**Causes**:

Vitamin D deficiency. Sunlight produces vitamin D in your skin. ...

-Certain surgeries. Normally, the stomach breaks down food to release calcium and other minerals that are absorbed in the intestine. ...

-Celiac disease. ...

-Kidney or liver disorders

-drug

**Sign and symptoms**:

-Osteomalacia, particularly when caused by a lack of vitamin D, can result in

-pain felt in the bones

-muscle weakness

-slight cracks in the bone (partial fractures).

A dull, aching pain can spread from your hips to the following places:

lower back.

pelvis.

legs.

ribs.