

A Comparative study of Osteoporosis (OP) & Osteoarthritis (OA)

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ABSTRACT

The purpose of this topic is to differentiate the condition of both disease and what similarities are between them. Through this particular study, check out similarities and confusion of both medical terms osteoporosis and osteoarthritis. The main thing is osteoporosis and osteoarthritis are two different medical conditions, which are related to bones and effect on musculoskeletal system. Osteoporosis is the condition in which the bones gradually weakens and the- become more and more fragile and easily broken while as osteoarthritis influences joints and its surrounding tissues. Most of the persons suffer from osteoporosis and osteoarthritis at the same time but these medical conditions are more frequent in female than in male. There are several factors that can increase the chances of developing osteoporosis and osteoarthritis both.

INTRODUCTION

In osteoporosis and osteoarthritis the term “Osteo” is common; from the greek osteo, means “bone”. Although osteoarthritis and osteoporosis as two medical disorders, directly bone related disease. Osteoporosis is a disease which influence bones in terms of reduction of quality and quantity, which can easily result in bone fracture. The clinical signs of osteoporosis show no pain or other symptoms which could point to changes in bone structure, unless a bone fracture is diagnosed.

Osteoarthritis is a disease which influences joints and surrounding tissue of a body seeing through clinical signs. Changes could be verified in terms of pain and limitations of movement and the cause of pain and way of -its treatment are numerous. Osteoporosis is commonly accepted as a bone disorder while osteoarthritis is generally considered as a joint cartilage disorder. The treatment is available for both medical disorders and it can help in reduction of medical disorder symptoms and improve the quality of life.

OSTEOPOROSIS

Osteoporosis is one of the disease that make people feel particularly are easy, cause bones to become fragile and prone to fracture.

Osteoporosis primarily a disease characterize by reduced bone strength that makes it susceptible to fracture. Bone strength is measured by establishing the bone mineral density (BMD), also called the bone mass. Persons suffering from osteoporosis have low bone mass/BMD (Adler, 2009).

According to the WHO data osteoporosis is the most frequent bone metabolic disorder. Osteoporosis is a condition of reduced quantity (mass) of the bone below the limits necessary to preserve the integrity of the skeleton. The leading symptoms is loss of bone mass, which results is- brittle bones easily.

The cells in bones are constantly renewed, but with the bone age it is becoming less valuable mechanically so as to maintain the mechanical quality, it is being remodeled. Osteoporosis is characterized by low bone mass due to an imbalance in favor of bone resorption, leading to changes in bone remodeling. Osteoporosis represents changes in bone density as well as in bone quality, including note only changes in the microarchitecture, but also changes in bone remodeling .

The remodeling process takes 3-4 months, and the same amount of bone that was destroyed is being renewed. The complete reconstructions of the bone takes 10 years. In the process of osteoporosis the destroyed bone is not restored completely and bone mass decreases.

Pathogenesis and pathophysiology of osteoporosis is multifactorial genetics, age a lack of estrogen, diet and insufficient physical activity . Osteoporosis is followed by reduces mobility, pain in bones and joints, cramps and muscle weakness, a decrease in body height, an increased risk of bone fractures, and even spontaneous fractures.

OSTEOARTHRITIS

Osteoarthritis is the most common rheumatic disease that affects the joints, although various extra-articular structures can be affected. Approximately 10% of the population in general has problems due to osteoarthritis. This disease particularly affects older people and it is estimated that more than 60% of people aged above 35 years suffer from osteoarthritis. About 55% of people with osteoarthritis have difficulty in performing activities of daily living, and about 25% of them do not perform these activities. Only osteoarthritis of knee joint causes disability as chronic heart and lung disease combined. Pathogenesis and pathophysiology of osteoarthritis is multifactorial; being overweight, the aging process, joint injury or stress, heredity, muscle weakness. Osteoarthritis often develops in the joints in which vicinity were fractured bones. It often affects cervical or lumbar spine, hip and knee. Cartilage damage in osteoarthritis is the result of an imbalance of enzymes that are released from the cells of articular cartilage (matrix metalloproteinases, aggrecanases and other enzymes). When the enzymes that destroy and build cartilage are produced in- equal amounts, cartilage naturally regenerates, and when enzymes of degradation are over-produced, cartilage damage occurs.

TREATMENT AND ITS CURE

Osteoporosis is treated and cure with specific exercises and adequate calcium and vitamin-D intake are important in persons any age, particularly in childhood as the bones are maturing and are essential the prevention and treatment of osteoporosis. In osteoarthritis exercise can help to maintain flexibility and movement in the joints. It is very important to consult with physiotherapist it may be helpful to advise about appropriate exercises, especial if people have both disease or condition.

The peoples they are suffering with both diseases osteoarthritis and osteoporosis worry that it might be difficult to have a successful joint replacement operation for osteoarthritis. If expert, surgeon are using appropriate techniques if bones are fragile and are done this regularly to help repair broken joint's bones, So usually there are no problems.

According to the journal of osteoporosis and physical activity; (ISSN:2329-9509): In advanced osteoporosis the sodium fluoride is employed to treat osteoporosis in women . It stimulates bone formation and will increase bone density in ladies with OP by eight percent annually with in the spine and by four percent with in the proximal femur. How ever it decreases cortical bone density with in the radius by two percent annually. Bone with excess fluoride content has associate abnormal structure, and it fragility could also be increased. So sodium fluoride therapy will increase bone mineral density.

DISCUSSION

Both medical disorder's directly related to bones and affect on the human musculoskeletal system. Osteoporosis and osteoarthritis are two different medical conditions that makes people feel particularly uneasy, one causes bones to become fragile and prone to fracture, on other hand the osteoarthritis is disease where damage occurs to joints at the end of the bones .

The studies proven that many older people will have both conditions of osteoporosis and osteoarthritis. But in most of the cases studies have also shown that if a patient have osteoarthritis patient might be less likely to develop osteoporosis.

Osteoporosis and osteoarthritis both treated and cure with specific exercises and adequate calcium and Vitamin-D intake are very important in person of any age. Its very important to consult with experts and physiotherapist also.

CONCLUSION

Osteoporosis and osteoarthritis are the two medical disorders which affect normal life of people and major health problems of modern society although both diseases are part of the aging process. Osteoporosis and osteoarthritis both can affect the quality of life in different ways. Both diseases are complex disorders of the musculoskeletal system.

A person may have osteoporosis and osteoarthritis at the same time. These medical disorders are more present in women than men. Osteoporosis and osteoarthritis are effecting the bones.

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