P156 - HYPOVITAMINOSIS D AND LOW BONE MINERAL DENSITY IN COCCYDYNIA AND CHRONIC PELVIC PAIN

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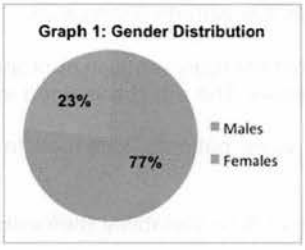
Introduction: Hypovitaminosis D is a deficiency of vitamin D which can be result of inadequate nutritional intake of vitamin D and/or inadequate sunlight exposure disorders limiting vitamin D absorption, and conditions impairing vitamin D conversion into active metabolites including certain liver, kidney, and hereditary disorders. Deficiency impairs bone mineralization, leading to bone softening diseases as rickets in children and osteomalacia and osteoporosis in adults.
Emerging evidence suggests vitamin D plays a role in the pathogenesis of non-alcoholic fatty liver disease (NAFLD).
Hypovitaminosis D is reported to be associated with back pain in postmenopausal women with low bone mass. While osteoporosis is generally a silent and asymptomatic disease until a fracture occurs, pain and osteoporosis are often associated. After age 30, bone resorption slowly begins to exceed new bone formation. This leads to bone loss. Bone loss in women occurs fastest in the first few years after menopause, but bone loss continues into old age. Factors that can contribute to bone loss include having a diet low in calcium, not exercising, smoking and taking certain medications such as corticosteroids. Corticosteroids are medications prescribed for a wide range of diseases, including arthritis, asthma, inflammatory bowel disease, lupus, and other diseases. Corticosteroids may cause osteoporosis when used chronically. Men are also at risk for bone loss. Even though bone loss usually occurs later in life compared to women, men can still be at high risk for

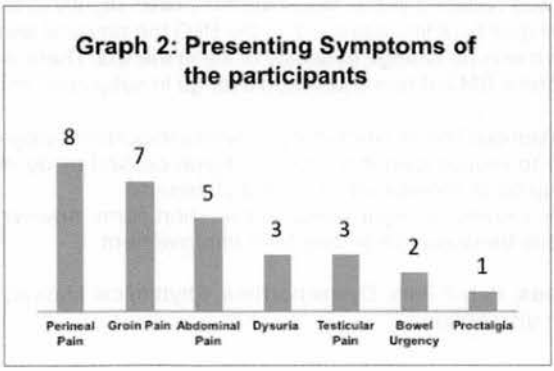
osteoporosis. By age 65, men catch up to women and lose bone mass at the same rate. Additional risk factors such as a small body frame, long-term use of corticosteroids, or low testosterone (or sex hormone) levels can increase the risk of osteoporosis in men. Coccydynia refers to pain in the coccyx or tailbone area, usually brought on by sitting too abruptly. The causes for this condition are sudden impact due to fall and childbirth. Other ways that coccydynia develops are partial dislocation of the sacrococcygeal synchondrosis that can possibly result in abnormal movement of the coccyx from excessive sitting, and repetitive trauma of the surrounding ligaments and muscles, resulting in inflammation of tissues and pain. Pelvic pain is pain in the area of the pelvis. Acute pain is more common than chronic pain. If the pain lasts for more than six months, it is deemed to be chronic pelvic pain. It can affect both women and men. Common causes include endometriosis in women, bowel adhesions, irritable bowel syndrome, and interstitial cystitis.

Aim: The aim of this study was to investigate the prevalence of Hypovitaminosis D and low bone mineral density in coccydynia and chronic pelvic pain.

Materials and Methods: Study design and population: A retrospective study was performed among 82 participants. **Study setting:** At a tertiary level rehabilitation centre. All the patients treated for coccydynia or chronic pelvic pain from January 1, 2005 to December 1, 2015 were included in the study. Their medical records were analysed for demographic details, co-morbidities and clinical presentation. The DEXA reports and vitamin D levels were recorded.

Results: The mean age of the participants was 32.78 years (range 22-65). 78 patients were IT professionals. 75 patients presented with coccydynia, of which 15 reported a history of direct trauma to the coccyx. Documented fracture of coccyx was noted in 3 patients and another 3 had an acute anteflexion of coccyx. The onset of coccydynia was associated with practise of Yoga in 1, after drainage of perianal abscess in 1 and after childbirth in 1. The symptoms worsened on driving a motorcycle (n=6) or riding a bicycle (n=1). Investigations revealed Hypovitaminosis D (n=13), Osteopenia lumbar spine (n=10), Osteopenia femur (n=6), Osteopenia radius (n=4), Osteoporosislumbar spine (n=5), Osteoporosis femur (n=3) and Osteoporosis radius (n=2). The other co-morbidities were Fibromyalgia (n=27), Thoracic Outlet Syndrome (n=10), Hyperuricemia (n=8), Hypermobility syndrome (n=7), Prolapsed Intervertebral Disc L4L5 (n=5), Bilateral Patellofemoral Pain Syndrome (n=3), Low Vitamin B12 (n=2), Hypothyroidism (n=2), Rheumatoid arthritis (n=1), Ankylosing spondylitis (n=1), Seronegative arthritis (n=1), Psoriasis (n=1), Chronic Fatigue Syndrome (n=1) and Ulcerative colitis with previous resection anastomosis (n=1). Myofascial trigger points were identified in the abdominal, lower back, buttock, perineal, groin and pelvic floor muscles. DEXA reports were found to be abnormal in every instance it was ordered, based on clinical judgement.





Implication: Vitamin D levels and DEXA scan can be considered in the workup of patients with coccydynia and chronic pelvic pain.

Conclusion(s): This study is the first to report a high prevalence of hypovitaminosis D (15.9%), low bone mineral density (36.5%) and Fibromyalgia (32.9%) in a relatively young patient population with coccydynia and chronic pelvic pain. Further study is recommended to investigate these remarkable associations.

Keywords: Pelvicpain, coccydynia, hypovitaminosis D, osteopenia, osteoporosis