

VADEMECUM FOR HIV PATIENTS

ADDENDUM #4

PREVENTION AND DIAGNOSIS OF BONE DISEASE

Bone disease is considered any affliction that involves the skeleton system. Can be very serious, and require prompt and effective treatment (e.g. osteomalacia and osteonecrosis). Bone diseases can be very painful and can rob the patient of mobility and independence. Symptoms vary by each disease, but can include symptoms such as frequent breaking, deformity, pain, limited range of motion, difficulty walking or walking distinctively different, dental problems, hearing loss, blue hue to the white area of the eyes, and headaches.

We here focus on less serious bone disease but commoner in people living with HIV/AIDS.

Osteopenia and Osteoporosis

Definitions

- Osteopenia
 - o T-score from -1 to -2.5 , in postmenopausal women and men aged ≥ 50 years.
 - o Z-score less than -2 , in premenopausal women and men aged < 50 years.
- Osteoporosis
 - o T-score less than -2.5 , in postmenopausal women and men aged ≥ 50 years.
 - o Z-score less than -2 and fragility fracture, in premenopausal women and men aged < 50 years.

Characteristics

- Reduced bone mass.
- Increased risk of fractures.
- Asymptomatic until fractures occur.
- Note - common in HIV:
 - o Up to 60% prevalence of osteopenia.
 - o Up to 10-15% prevalence of osteoporosis.
 - o Aetiology multifactorial.

Risk factors

- "Classic": older age, female gender, hypogonadism, family history of hip fracture, low BMI (≤ 19 kg/m²), vitamin D deficiency, smoking, physical inactivity, history of low impact fracture, alcohol excess, steroid exposure (minimum prednisone 5mg or equivalent for >3 months).

- Assess risk score or need for DXA of spine and hip using FRAX®. Limits:
 - o Only use if >40 years.
 - o May underestimate risk in HIV patients.
 - o Consider using HIV as secondary cause of osteoporosis.
 - o Assess risk biannually.
- If not using FRAX® consider DXA in any HIV person with one or more of the following conditions:
 - o Postmenopausal women.
 - o Men \geq 50 years.
 - o History of low impact fracture or high risk for falls.
 - o Hypogonadism.
 - o Oral glucocorticoid use (minimum 5mg prednisone equivalent for >3 months).

Diagnostic tests

- DXA scan.
- If BMD abnormal, check: Hyperparathyroidism, hyperthyroidism, malabsorption, hypogonadism / amenorrhoea, autoimmune disease, diabetes mellitus, chronic liver disease.
- If low BMD (lumbar and thoracic), perform Lateral spine Xrays.

Abbreviations

BMD = Body Mineral Density
DXA = Dual energy X-ray Absorptiometry
FRAX® = Fracture Risk Assessment Tool

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