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An audit of DEXA scans in patients with Inflammatory Bowel Disease

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INTRODUCTION

- Inflammatory bowel disease (IBD) is an established risk factor for osteopenia and osteoporosis.[1] This is because IBD is associated with low bone mineral density (BMD), which, in turn, is associated with an increased risk of fractures. Patients with IBD can have up to 40% more fractures than the general population, which contributes to increased morbidity and reduced quality of life.[2]
- The exact mechanism of bone loss is not well established. Studies in patients with IBD without any treatment have shown low BMD in those patients, suggesting that the inflammatory process contributes to this mechanism.[2]
- Older age, smoking, physical inactivity and menopause are known risk factors for osteoporosis in the general population, and may also be present in patients with IBD. Other IBD-specific characteristics – malnutrition, vitamin D deficiency, intestinal resection and corticosteroid use – may increase the likelihood of developing osteoporosis and fractures.[2]
- Time from diagnosis and disease activity may be associated with lower BMD values.[2]

AIM

To ascertain the level of bone health monitoring in patients with IBD.

METHODOLOGY

DEXA scan status was monitored in a cohort of patients with IBD that were reviewed by the IBD candidate Advanced Nurse Practitioner (cANP).

WHAT IS A DEXA SCAN?

DEXA stands for dual-energy X-ray absorptiometry, used primarily to measure BMD. The 'dual-energy' part refers to the use of 2 different X-ray beams to distinguish between bone and soft tissue. It is a quick, painless test that requires no special preparation. Lying flat on an X-ray table, a scanning arm passes over the body to measure bone density, usually taking 10–20 minutes. Results compare the patient's bone density with expected values for their age, gender and ethnicity. Differences are expressed as a standard deviation (SD) score, with T scores comparing to a healthy young adult and Z scores comparing to someone of the same age.

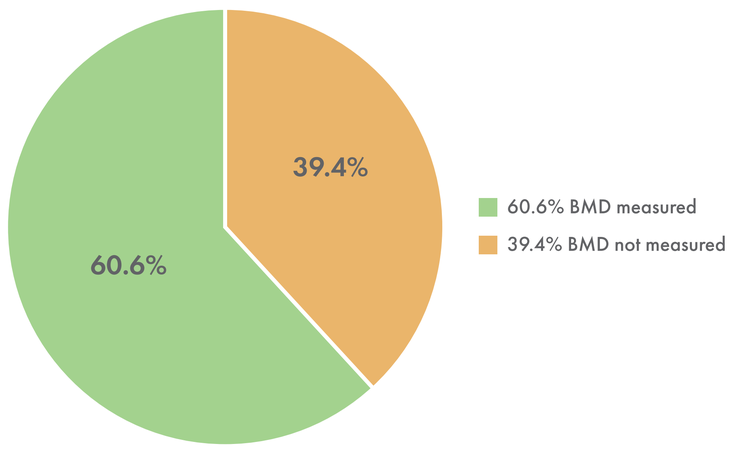
"This audit has highlighted the importance of ensuring DEXA scans are up to date and was not something I previously included routinely in my health assessment reviews of patients in clinic."
- IBD Specialist Registrar (SpR) trainee

RESULTS

- 39.4% of patients reviewed had never had a DEXA scan performed.
- By adopting a mindset of health maintenance, healthcare professionals can identify potential health risks early. This is especially important for patients with IBD. The findings of this audit highlight the need for routine assessment of bone health in this patient group.

While it's too early to see measurable results, we are confident that this proactive approach will drive improvements, and we are monitoring progress closely.

Recommendation: All healthcare professionals reviewing patients with IBD in outpatient clinics should assess and document each patient's DEXA scan status, and monitor their bone health accordingly.



CONCLUSION

Low BMD in IBD is associated with systemic inflammation, frequent corticosteroid use, low body mass index (BMI), Crohn's disease, smoking, micronutrient malabsorption (vitamins D, K and calcium), malnutrition, reduced physical activity and genetic factors. Although corticosteroid therapy is a known risk factor, patients with IBD remain at increased risk of low BMD even in the absence of steroid therapy.[1]

Current European Crohn's and Colitis Organisation [ECCO] guidelines recommend that patients with IBD who are considered at high risk of osteoporosis have their BMD assessed using DEXA scanning.[1]

ECCO Guidelines on Extraintestinal Manifestations in Inflammatory Bowel Disease

Statement 14 (Prevalence and investigation of osteoporosis and osteopenia):

Patients with IBD have an increased risk of developing osteoporosis and osteoporotic fractures, particularly of the spine. In patients with IBD at high risk for osteoporosis, bone mineral density measurement through a dual-energy X-ray absorption scan is recommended.[1]

References:

1. Gordon H, Burisch J, Ellul P, et al. ECCO Guidelines on Extraintestinal Manifestations in Inflammatory Bowel Disease. J Crohns Colitis. 2024;18(1):1-37. doi:10.1093/ecco-jcc/jjad108 2. Lima CA, Lyra AC, Mendes CMC, et al. Bone mineral density and inflammatory bowel disease severity. Braz J Med Biol Res. 2017;50(12):e6374. Published 2017 Oct 19. doi:10.1590/1414-431X20176374

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