PWE-045

APPLICATION OF THE WHO FRACTURE RISK ASSESSMENT TOOL (FRAX) TO PREDICT NEED FOR DEXA SCANNING AND TREATMENT IN PATIENTS WITH INFLAMMATORY BOWEL DISEASE AT RISK OF OSTEOPOROSIS

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Introduction Although patients with inflammatory bowel disease (IBD) are at increased risk of osteoporosis, low bone mineral density (BMD) confers only a modest increase in the risk of fracture. The FRAX score is a web-based clinical scale designed by the WHO to measure in individual patients the 10-year risk of fracture: it divides the level of risk into high, intermediate and low and can be calculated with or without BMD score. Using guidelines from the National Osteoporosis Guidelines Group (NOGG), the tool then recommends the need for treatment, DEXA scanning or lifestyle advice/reassurance. In order to prevent unnecessary DEXA scanning and anti-osteoporotic therapy, we aimed to assess the accuracy of pre-BMD FRAX scores in identifying at risk patients with IBD who need BMD measurement (intermediate risk) and/or preventive therapy (high risk with or without DEXA scan).

Methods We retrospectively calculated FRAX scores in 81 patients with Crohn's disease and 35 with ulcerative colitis in whom DEXA scans had been requested during the years 2005–2009 because they were considered by their clinicians to be at risk of osteoporosis. Scores were assessed before and after inclusion of BMD results obtained from the DEXA scans.

Results On DEXA scans, 47% (38/81) and 12% (10/81) patients with Crohn's disease were osteopaenic and osteoporotic,

respectively; equivalent figures for patients with UC were 34% (12/35) and 14% (5/35). The clinical FRAX score alone, when compared to the FRAX score including the BMD result, had a sensitivity of 100% (95% CI: 70%>100%), specificity of 40% (95% CI: 31%>50%), positive predictive value of 16% (95% CI: 9%>27%) and negative predictive value of 100% (95% CI: 90%>100%) in identifying those patients needing BMD measurement (intermediate risk) or preventive therapy (high risk). On the basis of their BMD alone and as part of our routine practice, eleven patients were started on treatment for osteoporosis with a bisphosphonate following their DEXA scan. In this small group of patients, there was no significant difference between our existing practice and that suggested by NOGG (post BMD inclusion) in the 97 patients at low or intermediate risk for fracture. However, according to the NOGG guidance, 10% (9/97) patients were being treated unnecessarily. Moreover, in the high risk group, while treatment was recommended by NOGG in 11/19 (58%) patients, only 1 patient was being treated with a bisphosphonate (p<0.01).

Conclusion In patients with IBD who are perceived by their clinicians as being at increased risk of osteoporosis and/or osteopaenia, the clinical criteria of the FRAX score can be used to predict more accurately than DEXA scan alone the risk of osteoporotic fracture.

Competing interests None.