ALEXANDER ESSER
University of Vienna,
Div. Gastroenterology & Hepatology Working Party
Inflammatory Bowel Disease (IBD),
Vienna, Austria

Influence of ileal pouch anal anastomosis on bone loss in ulcerative colitis patients

Navaneethan U, Shen L, Venkatesh PGK, Hammel J, Patel V, Remzi FH, Kiran RP.

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Low bone mineral density (BMD) is both prevalent and frequently unrecognised in patients with inflammatory bowel disease (IBD). With osteoporosis occurring at a rate of 10–14% in the IBD population already at a median age of 33–41 years, low BMD can well be considered an extra intestinal manifestation of IBD. Despite this, and the availability of guidelines from the American Gastroenterological Association and the American College of Gastroenterology, testing rates for osteoporosis have been reported to be low in IBD patients [1, 2].

Navaneethan et al. performed a case control study comparing bone density as measured by dual–energy x-ray absorptiometry (DXA) in patients with ulcerative colitis (UC) with and without proctocolectomy and ileal pouch-anal anastomosis (IPPA). Their aim was to clarify whether IPPA alters the risk of bone loss in UC. Decreased BMD was found in a higher proportion of patients in the IPPA group (31.1%) than in the non-operated UC group (15.1%). Independent risk factors for low BMD were advanced age, low body mass index and IPPA. The IPPA cohort was significantly younger and more likely to have extensive colitis and a family history of osteoporosis. Fragility fractures were detected in 8.1% of patients in the IPPA group versus 2.5% of the control group. This study was cross-sectional and therefore not designed to compare preoperative versus postoperative BMD. However, among those patients for whom preoperative DXA scans were available, colectomy with IPPA had a tendency to improve BMD in 53.8% of cases (not significant). Time from diagnosis of UC to restorative proctocolectomy and IPPA was significantly longer in patients with low BMD than in those with normal BMD.

The study by Navaneethan et al. is in concordance with current knowledge. Kuisma et al. found osteopenia and osteoporosis in 26.1% and 2.3% of 88 UC patients with restorative proctocolectomy, respectively [3]. Shen et al. detected osteoporosis in 32.1% of 327 patients recruited from a pouchitis clinic [4]. The study at hand also reproduces previous results from smaller trials, which found IPPA to increase BMD postoperatively in more than half of the patients studied [5].

By including patients after IPPA, Navaneethan et al. have selected a cohort of UC patients with unfavourable disease course, extensive glucocorticoid exposure and an intense systemic inflammatory response, all established risk factors for bone loss [6]. Therefore unsurprisingly, the yield of diminished BMD was significantly higher in cases versus controls.

In conclusion, osteoporosis and an increased fracture risk were once again demonstrated in UC patients undergoing proctocolectomy and IPPA and should not go overlooked in the management of IBD. Furthermore, incomplete medical disease control in this subset of UC patients and therefore prolonged steroid use and unduly delayed referral to eventual proctocolectomy might contribute to further preventable bone loss with all its unsavoury consequences. This and the reported gradual recovery in bone mineral density after IPPA warrant further research and might add to the increasingly accepted notion that restorative proctocolectomy should not be considered our last resort in UC but is best used in a timely manner as a therapeutic option in patients refractory to medical therapy.

References

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