Impact on bone mineral density after two years of switching to four dolutegravir-based triple or dual regimens

Background

While several studies describe the impact of protease inhibitors (PIs), tenofovir (TDF/TAF) and tenofovir (TDF) on bone mineral density (BMD), data on dolutegravir (DTG) is limited to the substudy of the SWORD trials. In the association of DTG with rilpivirine (RPV) and on a Spanish observational study on the switch from PI to DTG, bateni retrospectively evaluated all the patients who consecutively took at least once DTG from November 2014 to April 2017 (DOLUTILITY Study). We seek to describe such aspect as well.

Methods

Of the 139 subjects of the DOLUTILITY study we selected those who had a DXA scan within 6 months prior to switching to DTG and a control within 6 weeks 8-10 weeks later with the following inclusion criteria: (i) patients with AGITA control within 6 months of switching to a DTG-based regimen, (ii) switching to DTG from PI-based regimen, (iii) concordance of radiometric parameters and accumulating comorbidities. The analysis of concordance of radiometric parameters in Table 1. The q-fracture and Frax score slightly worsened in all, mainly as an effect of ageing and accumulating comorbidities. The analysis of concordance of radiometric parameters with plasma calcitriol/parathyroid levels failed to indicate a significant relationship.

Conclusions

Triple and dual regimens based on DTG and excluding TDF lead to significant gains in BMD. Even the simplification of salvage regimens to DTG plus bDRV, though maintaining a PI, yielded some improvement at the spine and hip level.

References