Dolutegravir (DTG)-based antiretroviral therapy (ART) is recommended in first-line regimens for all individuals with HIV-1 infection. However limited data are currently available in patients with acute HIV-1 infection (AHI). This study aims to compare the tolerability and viro-immunologic efficacy of dolutegravir-based regimens (DTG group) versus INI, PI, NNRTI (NODTG) based regimen in patients with AHI.

**RESULTS**

We retrospectively collected data from 43 patients with AHI: 20 on DTG, 23 in NODTG. In the follow-up no difference between the two groups was observed (median 1.8 years for both groups). Overall in the cohort, 81.4% were Italian and 83.7% men, with a median age of 41 years (IQR 31-48). Thirty-one (72.1%) were men who had sex with men (MSM). The median time between diagnosis and treatment initiation was 12 days (IQR 5-28). Differences between the two groups are reported in Table 1. Patients (7.0%) had detectable viremia at the end of the follow-up (EOF) (1 in NODTG, 2 in DTG) with no difference between the two groups (p=0.468). Regimens in details are showed in (Figure 1).

Nineteen subjects modified the ART, 15 for simplification, 4 for toxicity (2 on DTG due to neurological toxicity), 2 on Elvitegravir due to gastrointestinal toxicity. We reported ART changes during the follow-up in (Figure 2). Six patients had transmitted mutations at baseline (none to INI) all in DTG group (p=0.005). In 2 patients the 184V mutation has been detected; both were undetectable at EOF, one of them achieved viral suppression after two years. In Figure 3 is shown the probability of achieving viral suppression in the two groups during the follow up (log rank: p=0.5672). Both groups had a significant increase in CD4+ cell count, and CD4+/CD8+ ratio at 3, 6, 12, 24, and 36 months (p<0.05 for all comparisons) without significant differences between the two groups.

**CONCLUSION**

In our setting, antiretroviral therapy in AHI has started very early. DTG showed excellent viro-immunologic efficacy even when NNRTI transmitted mutations were present, interruptions rarely occurred due to neurological toxicity.