**BACKGROUND**

- HCV has complex interactions with human lipid metabolism leading to downregulation of cholesterol levels.
- Treatment with DAA was proven to induce a sharp and significant increase in total and low-density lipoprotein cholesterol (LDL) persisting beyond the treatment duration.
- DAD study has demonstrated that longer usage of CVD remains a risk factor for CVD events independent of lipid levels[1].

**AIMS**

- The aim was to examine cholesterol changes in HIV-HCV co-infected patients after HCV clearance and according toDRV/r, AT/VR or RAL exposure during DAA.

**STUDY DESIGN AND METHODS**

- The analysis includes data of HIV/HCV co-infected patients in the Icona and Hepacolona cohorts for whom pairs of biomarkers were available.
- The first pair (T0,T1) includes the two most recent values in a window [-12:0] months of the date of DAA initiation. The second pair (T1,T2) uses the latest in the window [+4,+12] months from the date EOT.
- Mean values at each time-point were calculated to test whether the variations were significantly different from zero.
- Univariable paired t-test were conducted to test whether there was an effect of DRV/r, AT/VR and RAL use.

**RESULTS**

We included 468 patients on ART, who achieved SVR; 22% on DRV/r, 20% on AT/VR and 24% on RAL. Patients' characteristics: median age 52 (50-55) years; 26% female; median BMI 21 (21-26) kg/m²; median CD4 584 (357, 824) cell/mm³; HCV genotype 1a (36%), genotype 1b (11%), genotype 3a (18%) and genotype 4 (13%) (Table 1).

**PAIR ANALYSES**

Pair analyses for all biomarkers are reported in Table2 (A and B). Total and LDL-cholesterol along with platelet count, which prior to DAA tended to be stable or decrease, significantly increased after HCV clearance whereas high-density lipoprotein (HDL) cholesterol remained unchanged. These changes, which occur in a short-time-lapse, potentially contribute to an increase in CVD risk through shared or separate pathways (as shown by means of a Direct Acyclic Graph [DAG] Figure).

**CONCLUSIONS**

- A complex and rapid change of risk factors for CVD risk seems to occur in HIV-HCV co-infected patients after HCV eradication with DAA, including increase of total and LDL-cholesterol.
- The clinical impact of these short term changes in lipid profiles on the long term CVD risk still need to be evaluated, as well as the role of DRV/r which might contribute to the increase of total cholesterol.
- It is increasingly important to assess individuals’ risk profiles before starting HCV treatment.

**References**


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