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[PL9.5] RELATIONSHIP BETWEEN USE OF STAVUDINE AND DIABETES MELLITUS

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PURPOSE OF THE STUDY: The incidence of diabetes mellitus (DM) in the D:A:D study is comparable to that in HIV-ve populations. This analysis aims to identify whether specific antiretrovirals (ARV) were associated with new onset DM.

METHODS: D:A:D is a prospective observational study of 23,437 HIV patients (p);DM is collected as a study endpoint. Poisson regression models assessed the relation between DM and exposure to ARV after adjusting for risk factors for DM (age, sex, race, body mass index, smoking),CD4 count, lipodystrophy, calendar year and lipids.

SUMMARY OF RESULTS: 435 p.developed DM over follow-up (rate 5.89/1000 person-years [PY]). The rate of DM (/1000 PY) increased from 3.96 in those unexposed to stavudine to 8.20 in those exposed for 2-3 years and then decreased. No other ARV was significantly associated with DM after controlling for stavudine use. The non-linear relationship with stavudine remained significant after adjusting for risk factors for DM. Time-updated total cholesterol (relative rate 1.06/mmol/L, $p=0.07$), HDL-cholesterol (0.47/mmol/L, $p=0.0001$) and triglycerides (6.35/doubling, $p=0.0001$) were all associated with DM. Adjusting for each of these separately reduced slightly the relationship between stavudine and DM. While lipodystrophy was significantly associated with DM (1.37, $p=0.008$), adjustment for this did not modify the relationship between stavudine and DM.

CONCLUSIONS Stavudine is significantly associated with DM after adjustment for risk factors for DM and lipids. Adjustment for lipodystrophy did not modify the relationship, suggesting that stavudine

potentially directly contributes to insulin resistance, rather than through lipodystrophy.

Plenary Session: Adverse Events I

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