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VIRAL REBOUND ACCORDING TO SPECIFIC ANTIRETROVIRALS IN PEOPLE WHO ATTAIN A VIRAL LOAD OF LESS THAN 50 COPIES/ML

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BACKGROUND

- The aim of highly active antiretroviral therapy (HAART) in HIV-positive individuals is to achieve and maintain suppression of the replication of the HIV virus to below detectable levels
- It is unclear whether there are differences in the risk of viral rebound in patients who have achieved a viral load<50 copies/ml on HAART according to specific drugs in the regimen. There are few randomised trials with sufficient power to address this.
- We investigated the rate of viral rebound in those who attain a viral load<50 copies/ml while receiving HAART according to the antiretrovirals in the regimen

METHODS

- All individuals in the UK CHIC study who have attained at least one viral load <50 copies/ml whilst on a HAART regimen (≥3 ARVs) were considered for inclusion.
- Patients were antiretroviral naïve at the time of starting HAART.
- So that included individuals had never failed a HAART regimen, all viral load measurements more than 6 months after the start of HAART and prior to an undetectable level were required to be less than 1000 copies/ml.
- We defined viral rebound as the first of of two viral loads>500 copies/ml or one viral load>500 copies/ml if this was the last measurement.
- We used Poisson regression to compare rates of viral rebound according to the specific dual NRTI combination and the 'third' drug (PI/NNRTI/abacavir) used.
- For each drug patients were followed from either the date of attaining a viral load <50 copies/ml on the regimen containing the specific drug or the date of switching if they did so with a viral load<50 copies/ml.
- Follow-up ceased at the date of viral rebound, stopping the drug (switching to another or stopping all drugs) or last available viral load. Patients could contribute follow-up to more than 1 drug if they had treatment changes.
- Analyses were adjusted for calendar year, whether switches had been made to the regimen, duration of suppressed viral load, CD4 and viral load at HAART, age, race, risk group and sex.

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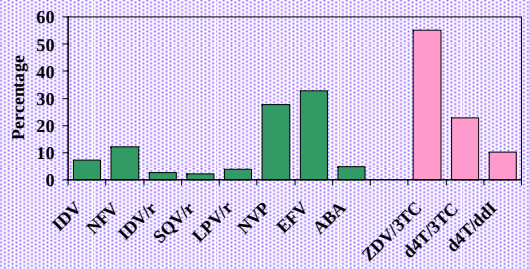
RESULTS

3565 patients were included:

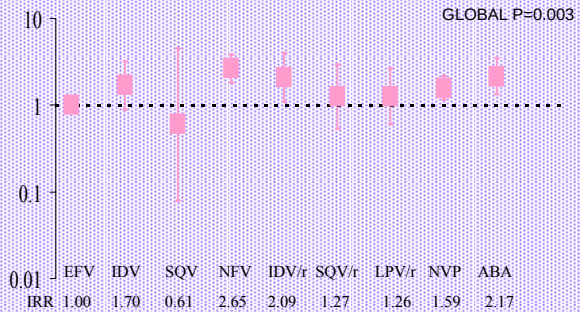
- 2824 (79.2%) were male
- 2003 (56%) were of white ethnicity
- 2197 (62%) had a homosexual risk for HIV transmission
- Median (IQR) CD4 count at start of HAART was 187 (87, 290) cells/mm^3
- Median (IQR) viral load at start of HAART was 4.9 (4.3, 5.4) copies/ml

FIGURE 1- MOST COMMON ANTIRETROVIRALS IN HAART REGIMEN AT THE TIME OF ACHIEVING A VIRAL LOAD< 50 COPIES/ML



- There were 381 cases of viral rebound in 6088 person years of follow-up (PYFU) in this cohort, (Incidence rate 6.26 viral rebound per 100 PYFU [95% confidence interval 5.63, 6.89]).

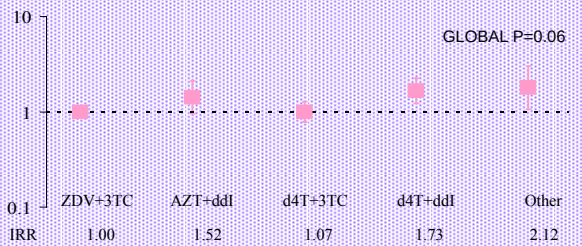
FIGURE 2- INCIDENCE RATE RATIOS (IRR) OF VIROLOGICAL REBOUND ACCORDING TO THE 'THIRD' DRUG (REFERENCE GROUP=EFAVIRENZ)



RESULTS (Continued)

- Compared to the reference group efavirenz, similar rates of virological rebound were seen amongst those receiving IDV, SQV (hard gel), IDV with ritonavir (r), SQV/r and LPV/r. Raised incidences of viral rebound were seen amongst those receiving ABA, NFV and NVP (global p=0.003) **(FIGURE 2).**
- Compared to the reference group AZT/3TC, increased rates of viral rebound were seen amongst those receiving d4T/ddI and 'other' combinations **(FIGURE 3).**

FIGURE 3- INCIDENCE RATE RATIOS (IRR) OF VIROLOGICAL REBOUND ACCORDING TO THE NRTI COMBINATION (REFERENCE GROUP=AZT/3TC)



CONCLUSIONS

- Generally, the rates of virological rebound in the UK CHIC cohort were low.
- Our results suggest that compared to those receiving efavirenz, those receiving nelfinavir, abacavir, or nevirapine had an increased risk of experiencing a virological rebound.
- The risk of rebound did not appear to differ according to the NRTI combination received, although d4T/ddI may be associated with an increased rate of virological rebound compared to ZDV/3TC.
- However, comparisons of antiretrovirals made on observational data such as these must be made with caution as one cannot rule out the possibility any observed differences could be due to residual confounding rather than differences in drug effectiveness.

United Kingdom Collaborative HIV Cohort (UK CHIC)

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