

Poster presentation

## Relationship between different types of non-adherence behaviour and virological response in unselected HIV-positive cohort

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### Purpose of the Study

Recent findings suggest that the threshold of adherence levels required to assure virological response is dependent on the individual drug classes. We aimed to investigate the impact of different non-adherence threshold and behaviours over virological response according with therapeutic characteristics of new cART regimens.

### Methods

Non-adherence was assessed by self-reported questionnaire for all patients attending a single centre outpatient unit. To select only very recent treatments, analysis was restricted to patients who completed a self-reported questionnaire in the last semester. Types of non-adherence investigated: <95% of therapy taken in the last month; <100% doses taken over the last week; timing deviation; drug holidays over the last month; interruption in drug refill over last 3 months. The relationship between different type of non-adherence and virological response was assessed both in univariate and multivariate models.

### Summary of Results

A total of 503 patients evaluated: 61.2% treated with PI-boosted, 31.2% with NNRTI; 4.6% with NRTIs, 2.4% with un-boosted PI. More than 84% of population was treatment-experienced with a median number of previous cART regimens of 3 (IQR:1–7). A total of 197 (39.2%) subjects received QD regimen, and 74.5% had plasma HIV viremia <50 cp/ml. At least one non-adherence behaviour was found in 302 (60%) persons. Prevalence or

reported deviations in adherence were: 22.5% for <95% of therapy taken in the last month; 22.7 for <100% doses taken over the last week; 43.1% for timing deviation; 15.9% for drug holidays, and 11.3% for interruption in drug refill. All but one (timing deviation) non-adherence behaviours were significantly associated with concomitant virological response (HIV-RNA <50 cp/ml), and each more deviation in adherence leads to 27% lower probability of virological response. At multivariate logistic model adjusted for type of regimen, time of treatment, treatment complexity (in terms of QD vs. BID), and HIV risk factor, number of non-adherence behaviours remains as the strongest variables associated with virological suppression (OR 0.65 for each more deviation; 95% CI 0.55–0.77;  $p < 0.0001$ ).

### Conclusion

Although there is the availability of more convenient cART, non-adherence remains a major challenge. Types of deviation from cART prescription are heterogeneous and strongly impact virological response. To optimize treatment adherence and virological response, a comprehensive investigation of all non-adherence behaviours is needed in clinical practice.