

## Poster Sessions – Abstract P132

# Facial emotional processing deficits in long-term HIV-suppressed patients

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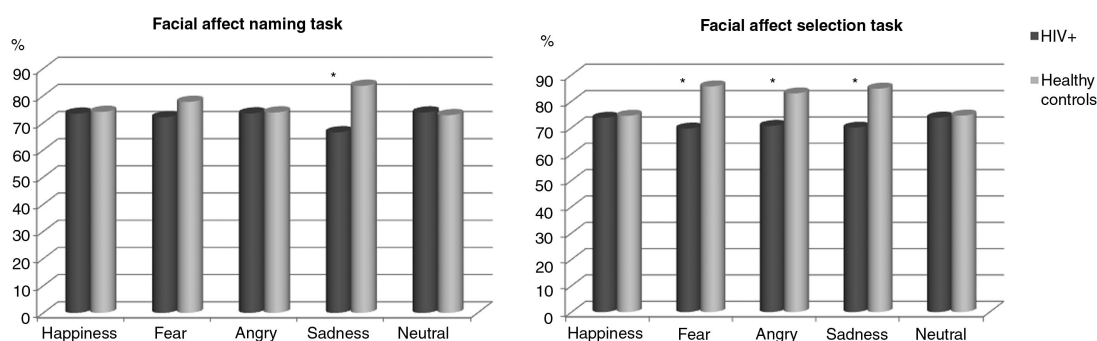
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**Introduction:** Emotional processing is basic for social behaviour. We examine for the first time the facial emotion processing in long-term HIV-suppressed patients.

**Materials and Methods:** Cross-sectional study comparing (ANOVA) six facial emotional processing tasks (two discrimination, two memory and two recognition) between HIV-suppressed patients (HIV+) on effective antiretroviral therapy (> 2 years) and matched (age, gender) healthy controls (HCs). Accuracy in the recognition of basic emotions (neutral, happiness, sadness, anger and fear) in each recognition task was also compared (Mann–Whitney U test) between HIV+ and HCs. In the subset of HIV+, we evaluate which factors were associated with impaired recognition of basic emotions (accuracy below 50%) by multiple logistic regression analysis. Overall performance in all six emotional tasks were separately compared between neurocognitive impaired and non-impaired HIV+.

**Results:** We included 107 HIV+, mainly Caucasian (89%) male (72%) with a mean age of 47.4 years, neurocognitively non-impaired (75.5%), and 40 HCs. Overall discrimination ( $p = 0.38$ ), memory ( $p = 0.65$ ) and recognition tasks ( $p = 0.29$ ) were similar in both groups. However, HIV+ had lower sadness recognition in both recognition tasks and lower sadness, anger and fear recognition in the facial affect selection task (Figure 1). Only estimated pre-morbid functioning (WAIS-III-R vocabulary subtest score) was significantly associated with sadness (1.99 [95% CI 1.18–3.58];  $p = 0.01$ ) and anger recognition deficits (2.06 [95% CI 1.14–3.45];  $p = 0.015$ ) in the facial affect selection task. In HIV+ individuals, neurocognitive impairment was associated with worse memory task results ( $p < 0.01$ ,  $d = 0.88$ ;  $p < 0.01$ ,  $d = 1.48$ ).

**Conclusions:** We did not find difference in the overall emotion processing between HIV+ and HIV- individuals. However, we found particular recognition deficits in the entire HIV+ sample. Estimated pre-morbid functioning was associated with sadness and anger recognition deficits in the facial affect selection task. Neurocognitive impaired HIV+ had additional memory deficits. These recognition deficits might conduct to social difficulties.



**Figure 1. Percentage of correct recognition responses given in each specific emotion by HIV+ and healthy control participants.**

Note: Significant differences ( $p < .05$ ) in distribution of correct response calculated by Mann-Whitney U-test. Axis Y = % of correct response.

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