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THE GUT IS AN HIV-1 RESERVOIR REGARDLESS OF PLASMA VIRAL LOAD LEVEL (pVL) IN PATIENTS ON AND OFF HAART

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INTRODUCTION: Current antiretroviral therapy achieves viral suppression in plasma below limit of detection in the vast majority of adherent patients. Plasmatic viral suppression does not imply viral eradication. Different reservoirs have been identified. Our aim is to study if duodenal mucosa serves as such, and if so, its relationship with plasma viral load and antiretroviral therapy.

METHODS: We selected distal duodenal biopsies from 43 HIV + patients (30 males, 16 females, mean age 38.2 years, MSM 19 cases, heterosexual transmission 19, IVDU 7, transfusion: 1). Mean CD4 was 390 cells/ml. We studied two groups. Group 1: Patients on HAART with pVL <50 (*n*:18), 6 with pVL >100,000 copies/ml); Group 2 (control): Patients off-HAART (*n*=19), all with pVL >100,000 copies/ml. RNA in-situ hybridization was performed, allowing qualitative detection of HIV-RNA in intestinal tissue. Ten biopsies from HIV negative patients were used as controls.

RESULTS: Out of 43 biopsies of HIV + cases, 20 had detectable HIV-RNA in the duodenal mucosa: (Group 1: 10 (41.6%) cases, group 2 *n*=10 (52.6%), *p*=0.29. In patients with detectable RNA in the intestinal mucosa, 8 had pVL below 50 copies and 12 had pVL >100,000 copies (*p*=0.97).

CONCLUSIONS: In this study HIV was detected in gut in patients off therapy with high viral load and in patients on HAART with undetectable pVL and virological failure. The intestinal mucosa seems to serve as a reservoir poorly influenced by levels of pVL or HAART.

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