Background

Primary HIV infection (PHI) is a high-risk period for viral transmission. Few data are available on the efficacy of cART initiated at the time of PHI on HIV genital shedding, and none regarding HIV reservoir in the genital tract (C.P. Palmer, AIDS 2007).

Results from the ANRS 1407 OPTIPRIM trial showed that the efficacy on HIV blood reservoir of a two-year early antiretroviral containing raltegravir plus maraviroc did differ from standard cART (Cherel et al, Lancet ID 2015).

Objectives

The objective of this substudy in the Optiprim ANRS 1407 trial was to assess HIV shedding in semen. Blood and semen HIV-RNA and HIV-DNA were quantified to assess the impact of early treatment in patients with PHI.

Methods

- Patients presenting with PHI (inclusion criteria: HIV-1 western blot (WB) s4 antibodies (Ab) and positive HIV-RNA, and CD4>500 µL). In case of asymptomatic PHI were enrolled in the ANRS 1407 OPTIPRIM study and received cART or placebo (as of early cART.
- 21 patients signed to participate in the HIV reservoir substudy

- Techniques and metrics:
  - Total HIV-DNA, in blood and semen cells were quantified using an ultrasensitive real-time PCR (Biologic Redbioc, France).
  - HIV-RNA in blood and seminal plasma were quantified using an ultrasensitive real-time PCR (Roche or Abbott, France respectively).
  - IP-10, IL-8, sCD14, sCD163 were quantified in duplicate, with specific ELISA assays (Human: IL-8, IL-6; Platinum ELISA, Abboccious; Human cytokine CCL2/15 ELISA, Human CD14 Dustit ELISA and Human CD163 Dustit ELISA, P&I Systems, Minneapolis, Minnesota).
- Analysis was conducted overall and after differentiating acute (≤55 µL) from recent (≥55 µL) HIV infection.