

SPECIAL CONSIDERATIONS IN PREGNANCY

No large studies have been conducted that describe the epidemiology or manifestations of HIV-associated OIs in pregnant women. No data suggest that the spectrum differs from that among non-pregnant women with comparable CD4+ T cell counts. Absolute CD4+ T cell counts characteristically drop during pregnancy, probably due to dilutional effects of the increased plasma volume. CD4+ T cell percentages are generally more stable and are preferred over absolute CD4+ T cell counts to describe the degree of immune suppression during pregnancy.

A number of physiologic changes occur during pregnancy that may influence the presentation of acute OIs and the considerations for implementing OI treatment and/or HAART. These changes include the following:

- ❖ Cardiac output increases by 30% to 50% with concomitant increase in glomerular filtration rate and renal clearance.
- ❖ Plasma volume increases by 45% to 50% while red cell mass increases only by 20% to 30%, leading to dilutional anaemia.
- ❖ Increased tidal volume and pulmonary blood flow may lead to increased absorption of aerosolised medications. Changes in late pregnancy may affect distribution of aerosolised medication. The tidal volume increase of 30% to 40% must be considered if ventilatory assistance is required.
- ❖ Placental transfer of drugs, increased renal clearance, altered gastrointestinal absorption, and metabolism by the foetus may affect maternal drug levels.
- ❖ Limited pharmacokinetic data are available on the effects of pregnancy on levels of OI therapy drugs. Use usual adult doses based on current weight, monitor levels if available, and consider increasing the dosage if the patient is not responding as expected.

In general, given the morbidity and mortality associated with OIs in HIV-infected persons, OI treatment should not be withheld during pregnancy. Therapy should generally be the same as that for non-pregnant women, but treatment options that minimise toxicity may be preferred. Currently available reproductive data on drugs potentially indicated for therapy of OIs are summarised in *Appendix A*.

For pregnant women diagnosed with an OI and not currently on HAART, prompt initiation of OI therapy and HAART should be encouraged. Decisions regarding immediate versus delayed initiation of HAART in pregnancy should take into account gestational age, maternal HIV RNA levels and clinical condition, and potential toxicities and interactions between HAART and OI drugs.

Pregnant women with active OIs who receive drugs for which information about their use in pregnancy is limited should have additional evaluation of foetal growth and well-being. Weekly foetal non-stress testing should be initiated at thirty-two weeks of gestation where possible, unless indicated sooner based on clinical or ultrasound findings. A summary of preclinical and human data on OI drugs in pregnancy is provided in *Appendix A*.