



HAL
open science

Pregnancy care in two adolescents perinatally infected with HIV.

Alessandra Meloni, Milena Tuveri, Marco Florida, Francesca Zucca, Grazia Borghero, Donatella Gariel, Gian Benedetto Melis

► **To cite this version:**

Alessandra Meloni, Milena Tuveri, Marco Florida, Francesca Zucca, Grazia Borghero, et al.. Pregnancy care in two adolescents perinatally infected with HIV.. *AIDS Care*, 2009, 21 (06), pp.796-798. 10.1080/09540120802511976 . hal-00513476

HAL Id: hal-00513476

<https://hal.science/hal-00513476>

Submitted on 1 Sep 2010

HAL is a multi-disciplinary open access archive for the deposit and dissemination of scientific research documents, whether they are published or not. The documents may come from teaching and research institutions in France or abroad, or from public or private research centers.

L'archive ouverte pluridisciplinaire **HAL**, est destinée au dépôt et à la diffusion de documents scientifiques de niveau recherche, publiés ou non, émanant des établissements d'enseignement et de recherche français ou étrangers, des laboratoires publics ou privés.



Pregnancy care in two adolescents perinatally infected with HIV.

Journal:	<i>AIDS Care - Psychology, Health & Medicine - Vulnerable Children and Youth Studies</i>
Manuscript ID:	AC-2008-04-0176.R2
Journal Selection:	AIDS Care
Keywords:	pregnancy, HIV, adolescence, counselling, perinatal infection



Pregnancy care in two adolescents perinatally infected with HIV.

Running head: **Pregnancy care in HIV infected adolescents**

Word count: **1474**

Financial support: **None**

Keywords: **Perinatal infection, HIV, adolescence, pregnancy, counselling**

Abstract

We describe the main issues encountered in pregnancy care in two perinatally infected adolescents with HIV. Despite the young maternal age, both mothers complied well with visits and treatment during pregnancy and delivered at week 38 through elective caesarean section. Both, however, missed the regular gynaecological and the routine HIV visits scheduled after pregnancy. Both infants following HIV exposure were confirmed HIV negative at the end of tests performed in the first year of life. A growing number of similar cases is expected as perinatally infected children enter adolescence and become sexually active. These two cases indicate the feasibility of an adequate pregnancy care in very young HIV-positive women, but suggest that potential difficulties may be encountered in this population in maintaining optimal care after delivery. Such objectives might be better obtained with a timely transition of adolescents with HIV from paediatric clinics to a multiservice care setting which includes infectious diseases clinics, obstetric and gynaecologic departments and, particularly, counselling and educational services.

Introduction

The first reported cases of vertical HIV transmission date to more than two decades ago (European Collaborative Study, 2001). Since then several thousands of cases have been reported in western countries (Del Maso et al., 1999; McConnell et al., 2005; Tovo, 2006). As this vertically infected population becomes older, a growing number of HIV infected children are entering adolescence and becoming sexually active. This transition poses new challenges to the health system and care providers, and reproductive health services have a key role in properly addressing the new issues raised by the start of sexual activity.

Some studies have documented abnormal cervical cytology, HPV infection and other sexually transmitted diseases in adolescents infected with HIV either perinatally or through adolescent risk behaviors (Belongia et al., 1997; Brogly et al., 2007; Moscicki et al., 2004), confirming the common occurrence in this population of unprotected sexual intercourses, a condition which may potentially lead to HIV horizontal transmission and unintended pregnancies. A growing number of reports have confirmed the increasing occurrence of pregnancy, which appears to be unplanned in a substantial proportion of cases, among perinatally infected young women with HIV (Brogly et al., 2007; Centers for Disease Control and Prevention, 2002; Chibber & Khurranna, 2005; Koenig, Espinoza, Hodge & Ruffo, 2007; Thorne, Townsend, Peckham, Newell & Tookey, 2007). We report two cases of vertically infected HIV-positive adolescents, referred for pregnancy to our Obstetrics and Gynaecology Clinic. Pregnancy in adolescents perinatally infected with HIV is expected to occur in many clinics in other parts of the world, reproducing similar scenarios. It may therefore be important to define the circumstances of such pregnancies, and to which extent a proper management during pregnancy and after delivery is possible in these very young women.

Clinical context

Our Obstetrics and Gynaecology Clinic represents a regional referral centre for pregnancy in HIV infected women. We selected among all the pregnant women with HIV recently followed at our center (1999-2007) those who were infected perinatally, using the hospital clinical records to abstract data concerning clinical history, laboratory measures of HIV infection, medical visits, ultrasonographic assessments, pregnancy outcomes, newborn data, and follow up evaluations after delivery. Among 74 pregnancies in HIV-positive women referred to our clinic in the above period, two occurred in adolescents perinatally infected with HIV.

Description of cases

Case 1 was a 19-year-old woman with perinatal HIV infection, diagnosed at the age of six. Both her parents were HIV-infected, and father had died of AIDS. She had received intermittently antiretroviral treatment since the age of 9, with a low level of adherence. Her sexual partner is HIV-negative and she had a voluntary termination of pregnancy at the age of 17. She had no history or evidence of STD and had negative tests for HBV and HCV infection. Pap smears were negative for infection and for intraepithelial lesion or cancer. She presented at 14 weeks gestation, reporting no recent antiretroviral treatment. A combination of zidovudine, lamivudine and nelfinavir was started, which she continued regularly until the end of pregnancy. Her CD4 count and HIV viral load were, respectively, $330/\text{mm}^3$ and 13300 copies/ml at the end of first trimester (before starting treatment) and $419/\text{mm}^3$ and 317 copies/ml at 35 weeks gestation. The course of pregnancy was regular, with no complication. She attended prenatal visits monthly, with regular ultrasonographic foetal assessments. Elective caesarean section was performed at week 38, with delivery of a 2800-gram male infant. Intravenous zidovudine was administered during delivery, and the infant received oral zidovudine for six weeks.

Breastfeeding was avoided. She stopped treatment after pregnancy and did not return for routine gynaecological post-partum visits and for routine follow up HIV visits. The infant was always negative for HIV detection by PCR and antigen assays performed in the first two years of life.

Case 2 was a 17 years old primipara. She presented for the first time at the end of II trimester of pregnancy and HIV infection was diagnosed at 27 weeks gestation. At this time her CD4 count was $198/\text{mm}^3$ and her HIV viral load was 620 copies/ml.

Her father was an intravenous drug user (HIV status: unknown), and her mother was diagnosed with HIV during a subsequent pregnancy with a different, HIV-negative partner. At this time our patient was 7 years old. Her current and lifetime-only sexual partner is HIV-negative. She had no history of blood transfusions, STD, intravenous drug use or other risk conditions. The absence of an available HIV test before pregnancy did not allow to prove definitely perinatal transmission, but family and personal history make quite unlikely a different route of transmission.

Tests for both hepatitis B and hepatitis C were negative and Pap smear was negative for infection and for intraepithelial lesion or cancer. Antiretroviral treatment with lamivudine, zidovudine and nelfinavir was started, and at 34 weeks gestation her HIV viral load was <50 copies/ml (CD4 count not evaluated). She attended prenatal visits monthly and followed regularly ultrasonographic foetal evaluations until the end of pregnancy. After an uncomplicated pregnancy, she delivered through elective caesarean section at week 38 a 2860-gram male infant. Intravenous zidovudine was given during delivery and the infant received oral zidovudine for six weeks. Breastfeeding was avoided. She stopped treatment after pregnancy and did not return for routine gynaecologic and HIV visits. Virological HIV tests on the infant remain negative at 12 months of age.

Discussion

These two cases clearly underline different important issues related to HIV, adolescence and pregnancy. The occurrence in both our cases of an unplanned pregnancy at the age of 17 (in case 1

this ended in a voluntary termination in a previous pregnancy) underlines the importance of effective counselling and educational programs specifically directed to adolescents with HIV. Given the frequent occurrence of inconsistent or absent condom use in this population (Koenig et al., 2007), such programs should not only provide information on HIV and pregnancy, sexually transmitted diseases and contraception, but also actively promote the adoption of safer behaviour based on a regular condom use. The involvement of partners in counselling sessions might be effective, because seropositive female adolescents have been reported to be more supported than seronegative adolescents (Koenig et al., 2007).

Gynaecologic services play an important role in promoting better reproductive and sexual health and preventing unintended pregnancies. It is therefore important that adolescents with HIV are provided with facilitated access to such services, favouring a timely transition from a paediatric context to a setting of multiservice care, provided through infectious diseases clinics, obstetric and gynaecologic departments, counselling services, and psychological support.

A reassuring finding of our observations is that even in adolescents, a regular and adequate care during pregnancy is possible. Both mothers were compliant with antiretroviral treatment during pregnancy, as shown by decreases in HIV viral load. They were also compliant with prenatal visits, ultrasonographic foetal assessments, and infant follow-up. This suggests that a good management of pregnancy in adolescents with HIV and an adequate follow up of infants is possible, despite the very young maternal age. After delivery, however, both mothers missed subsequent gynaecological and HIV follow-up visits.

In our local experience adult HIV-infected women are more compliant with ARV prescriptions and routine visits following delivery compared to before pregnancy. However, they encounter difficulties in adapting the complex implications of everyday life with HIV to a social context in which stigma against HIV is still present. Such difficulties and concerns may be even more marked

in adolescents compared to adult women and may have represented a reason for refusing follow up in our two cases.

More efforts might be necessary to maintain care at an optimal level after delivery in adolescents. The similar behaviour of the two cases that we reported suggests that they were worried about possible vertical HIV transmission but less compliant with visits for HIV infection following delivery. The small number of cases precludes generalization to the wider population. Nonetheless we believe that in similar cases particular attention should be paid to the connection between clinical and social services in order to guarantee sustainable contacts between adolescent women with HIV and care services after a transient period of pregnancy-related care. Specific research should also address the psychological aspects and the individual motivations underlying difficulties in maintaining care and regular contacts with health structures.

Key points

- HIV-infected adolescents may present with unplanned pregnancy without any preconception counselling.
- Despite young age, even very young HIV-positive women may be properly managed during pregnancy, and have adequate compliance with therapy prescriptions, prenatal visits, ultrasonographic foetal assessments, and infant follow-up.
- Adolescents with HIV, however, may not reaccess women health care services after pregnancy.
- The connection between clinical and social services should be improved to guarantee appropriate counselling and care in adolescents with HIV.
- Specific research should investigate the psychological aspects and the individual motivations of adolescents with HIV underlying their behaviour with respect to health care.

Authors' contribution:

AM conceived the manuscript and drafted the article; AM and MF participated in the design and revision of the manuscript; MT, FZ, GB, DG and GBM were clinicians who followed mothers and newborns and actively participated in the acquisition of data and finalisation of the manuscript. All authors read and approved the manuscript in the current form.

REFERENCES

- Belongia, E.A., Danila, R.N., Angamuthu, V, Hickman, C.D., DeBoer, J.M., MacDonald, K.L., & Osterholm, M.T (1997). A population-based study of sexually transmitted disease incidence and risk factors in human immunodeficiency virus-infected people. *Sexually Transmitted Diseases*, 24, 251-6.
- Brogly, S.B., Watts, D.H., Ylitalo, N., Franco, E.L., Seage, G.R. 3rd, Oleske, J., Eagle, M., & Van Dyke, R. (2007). Reproductive health of adolescent girls perinatally infected with HIV. *American Journal of Public Health*, 97, 1047-52.
- Centers for Disease Control and Prevention. (2003). Pregnancy in perinatally HIV-infected adolescents and young adults-Puerto Rico, 2002. *Morbidity and Mortality Weekly Report* , 52, 149-51.
- Chibber, R. & Khurranna, A. (2005). Birth outcomes in perinatally HIV-infected adolescents and young adults in Manipur, India: a new frontier. *Archives of Gynecology and Obstetrics*, 271, 127-31.

Dal Maso, L., Parazzini, F., Lo Re, A., Favero, A., La Vecchia, C., & Franceschi, S. (1999). Paediatric AIDS incidence in Europe and the USA, 1985-96. *Journal of Epidemiology and Biostatistics*, 4, 75-81.

European Collaborative Study (2001). HIV-infected pregnant women and vertical transmission in Europe since 1986. *AIDS*, 15:761-70.

Koenig, L.J., Espinoza, L., Hodge, K., & Ruffo, N. (2007). Young, seropositive, and pregnant: epidemiologic and psychosocial perspectives on pregnant adolescents with human immunodeficiency virus infection. *American Journal of Obstetrics and Gynecology*, 197 (3 Suppl), S123-31.

Levine, A.B., Aaron, E., & Foster, J. (2006). Pregnancy in perinatally HIV-infected adolescents. *Journal of Adolescent Health*, 38, 765-8.

McConnell, M.S., Byers, R.H., Frederick, T., Peters, V.B., Dominguez, K.L., Sukalac, T., Greenberg, A.E., Hsu, H.W., Rakusan, T.A., Ortiz, I.R., Melville, S.K., & Fowler, M.G. (2005). Pediatric Spectrum of HIV Disease Consortium. Trends in antiretroviral therapy use and survival rates for a large cohort of HIV-infected children and adolescents in the United States, 1989-2001. *Journal of Acquired Immune Deficiency Syndromes*, 38, 488-94.

Moscicki, A.B., Ellenberg, J.H., Crowley-Nowick, P., Darragh, T.M., Xu, J., & Fahrat, S. (2004). Risk of high-grade squamous intraepithelial lesion in HIV-infected adolescents. *Journal of Infectious Diseases*, 190, 1413-21.

Thorne, C., Townsend, C.L., Peckham, C.S., Newell, M.L., & Tookey, P.A. (2007). Pregnancies in young women with vertically acquired HIV infection in Europe. *AIDS*, 21, 2552-6.

Tovo, P. (2006) Recent Results from the Italian Register for HIV infection in children. *Fifth National Research Program on AIDS, Progress Report*, 23.

For Peer Review Only