



PLENARY 5B

PREVENTING INFECTIONS BEFORE AND DURING PREGNANCY

Moderators:

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IMMUNISATIONS WITHIN THE FAMILY PLANNING PROGRAM IN HUNGARY

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The National Institute of Child Health has various activities and programs targeting the health of children, one even prior to conception: The Preconception Primary Prevention Program (PPPP), for family planning couples. The aim of this program is to deal with all, possibly preventable health risk prior to the conception of a baby.

As an infectiologist/vaccinologist, my task in this program is fourfold:

- give information to future parents about the vaccine preventable pregnancy risks
 - Hepatitis B, rubella, varicella
- do serological tests to verify susceptibility, if appropriate
- offer immunisation if requested
- discuss any other problem related to infections, if detected
 - e.g. chronic infections, toxoplasma gondii, etc.

These visits present unique opportunities to discuss immunisation issues in general, and the significance of childhood immunisation in particular for the future baby. The Hungarian National Immunisation Plan is discussed in detail, and newer vaccines, not yet incorporated into the schedule are also mentioned. The lecture summarizes our experiences related to immunisation issues within the PPPP for the last two years – attending to about 300 couples.



INFECTIONS DURING PREGNANCY – CLINICAL ASPECTS

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The author presents an overview of clinically important infections during pregnancy. Based on literature data and clinical experiences he focuses mainly on infections with possible deleterious effects either on the fetus or on the pregnant mother. Main emphasis is placed on the clinical aspects of these infections: the route of acquisition, the signs and clinical symptoms, as well as the available screenings and diagnostic possibilities. The major venereal diseases are also discussed in detail, with special attention to their socio-medical consequences. Possible fetal teratologic effects as well as any other negative fetal outcomes of the infections are summarized. Preventive methods – as the only effective solution of infections during pregnancy – are proposed to avoid fetal demise due to infections.



RUBELLA VACCINATION CAMPAIGNS IN BRAZIL, IMPACT ON THE BIRTH PREVALENCE RATES OF CONGENITAL ANOMALIES, AND ON INDUCED ABORTIONS

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Nationwide rubella vaccination campaigns were performed in Brazil in November 2001, and July 2002. Their impact in the frequency of congenital anomalies was attempted using the previously tested [Rittler et al. 2004, Birth Defects Research-A; 70:939-943] dyad of cardiac and ocular malformations as a sentinel phenotype, corresponding to ICDX codes Q10-Q15 plus Q20-A27. The birth prevalence of this dyad was considered as the proportion of all cardiac anomalies with and without associated anomalies in order to neutralize the effect of the secular rising trend in the registered prevalence of congenital heart defects due to improving neonatal diagnostic technology. The observed period was 1972-2005. As it was also reported for Chile, there was a significant rise in the prevalence of the dyad between the mid 1970s and the mid 1980s. Thereafter, the prevalence rate decreased constantly. The decreasing rate after vaccination was of 39% (IRR=0.93, $p<0.001$). However, this could be in part due the previous decreasing trend. There are indications suggesting the increase of induced abortions during and immediately after both rubella vaccination campaigns. Even if actual data are not available because induced pregnancy termination is illegal in Brazil, the increase was registered at different TIS (Teratogenic Information Services) in the country. This unwanted side effect could be avoided if the Ministry of Health were less hesitant on the teratogenicity of the vaccine when administered during pregnancy, and the obstetrical medical staff were better informed on the safety of the vaccine.



PROGRESS IN PREVENTION OF MOTHER-TO-CHILD TRANSMISSION OF HIV IN UKRAINE: SITUATION IN LVIV REGION

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Background: Tendency towards increase of HIV-infected population observed in Ukraine is one of the most prominent among European countries. 410 000 was the estimated number of people living with HIV/AIDS in Ukraine by the end of 2005 and 49% of HIV cases occurred among women 15-49 years old at that time. Seroprevalence among pregnant women rose from 0.12% in 1998 to 0.34% in 2004. The rate of HIV infection spread is known to be relatively slower in Lviv region in the West of Ukraine.

The *objective* of present study was to evaluate changes in perinatal HIV transmission in Lviv region under the influence of mother-to-child transmission prophylaxis.

Materials and methods: Prophylaxis and surveillance of mother-to-child HIV transmission started in 2000 in Lviv region. Women were tested twice during their pregnancy for HIV and antiretroviral prophylaxis was offered to HIV-positive ones. These mothers were advised not to breastfeed. Antiretroviral prophylaxis with zidovudine and nevirapine was applied in accordance with national guidelines. Elective cesarean section was performed in HIV-infected women since 2005. Mother-to-child transmission rate was evaluated.

Results: In 2000 in Lviv region 3 HIV-infected women delivered 3 HIV-negative babies. In 2007 74 HIV-positive pregnancies completed with deliveries which was 0.28% of 26831 annual deliveries. Proportion of pregnant women tested for HIV increased from 79.5% in 2000 to 99.8% in 2007. One cesarean section was performed in the case of HIV-infection in 2005 (4.35% of HIV-positive pregnancies) and 10 (13.5% of HIV-positive pregnancies) in 2007. Overall mother-to-child transmission rate decreased from 50.0% (3 babies of 6 HIV-positive pregnancies) in 2002 to 9.5% (7 of 74) in 2007. This rate was much lower (as low as 1.59%) among mothers and their children who strictly followed the prophylaxis protocol.

Conclusion: Quality of surveillance and prophylaxis of perinatal HIV transmission improved significantly during the last 8 years in Lviv region. The proportion of pregnant women checked for HIV is approaching 100%. At the same time mother-to-child transmission rate is slightly higher than average in Ukraine (8.2% in 2004). Efforts should be aimed at avoidance of prophylaxis protocol infringement.