

Infectious diseases: a challenge in spontaneous and assisted reproduction

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Bloodborne viruses can be transmitted through sexual activities. Rate of transmission depends upon the amount of viral content in genital fluids and the modalities of the act of intercourse. Hepatitis B virus (HBV) and Human Immunodeficiency Virus (HIV) are present in pre-jaculatory genital fluids in the male and in vaginal and cervical fluids in the female. Hepatitis C virus (HCV) is detected inconstantly in semen and in the female genital tract. Couples in which only one partner is virally infected are at risk of transferring the infection when intercourse is aimed at gestation. Male to female transmission is more efficient than female to male possibly depending on the substantial amount of virus in semen. Different strategies can be defined to ascertain the risk of transmission and select the safest option to conceive. In the case of HBV vaccination of the uninfected partner is the safest option and spontaneous conception can occur without risk. In the case of HIV, antiviral treatment can reduce the risk of infection but non-statin shedding of the virus in semen must recommend timed acts of intercourse providing pre-exposure prophylaxis to the healthy partner. Semen washing, a specific processing method to eliminate both seminal infected cells and free virions, allows to proceed with intrauterine insemination or extracorporeal fertilization. This method has been used for over twenty years without the report of even a single case of infection. When only the female partner is infected with HIV auto-insemination zero the risk of infection. HCV is poorly transmitted through penovaginal intercourse and there is no specific recommendation against spontaneous conception.