

Transmission

- Human papillomaviruses (HPVs) represent a large collection of viral types associated with significant clinical disease of cutaneous and mucosal epithelium. HPV-associated cancers are found in anogenital and oral mucosa, and at various cutaneous sites
- Sexual transmission of HPV is generally accepted, however, non-sexual transmission of the virus is often debated.
- One set of evidence highlighting a potential non-sexual route of self-inoculation of HPV infection is the detection of HPV positive female virgins

- , vertical transmission can occur through the following mechanisms of transmission: periconceptual transmission (during fertilization of an oocyte or immediately after fertilization), prenatal (during pregnancy), and perinatal (during or immediately after birth).

- we will discuss the significance and implications of the presence of papillomavirus in nonepithelial sites, and examine the possible consequences of fetal exposure to HPV and the extent to which these new findings can provide a better understanding of the natural history of papillomavirus infection

PRENATAL TRANSMISSION

- HPV DNA has been detected in **amniotic fluid ,placenta,** and the umbilical cord
- . Both chorionic and placental tissue can be infected through the **hematogenous route** and hence, HPV can be spread to amniotic cells that are then ingested by the fetus
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- **Transplacental infection**, another possible means of HPV intrauterine transmission, can occur through the **ascending** route from the maternal genital tract, as it has been shown that the presence of HPV-DNA, both in amniotic fluid [3] and the umbilical cord [2], is correlated with cervical intraepithelial lesions in pregnant women.

- Additionally, the risk of the newborn having the same HPV type as that found in the maternal genital tract is 4 times greater when the umbilical cord blood is positive for the same HPV

perinatal transmission

- perinatal transmission will be considered as the result of the fetus coming into contact with infected cells of the vagina and cervix during birth.
- Some authors have demonstrated that there is both an increased rate of HPV detection among newborns by vaginal delivery (51.4%), compared to those delivered by cesarean section (27.3%) [33] and an increased incidence of juvenile respiratory papillomatosis after prolonged delivery (>10 hours)

C/S IN HPV?????

- This lack of agreement is based on 3 hypotheses:
- (1) the risk of disease transmission would be low;
- (2) a cesarean delivery does not ensure complete protection, because papillomatosis transmission has even been observed in elective cesarean delivery;
- (3) the risks resulting from a cesarean section are greater than the potential benefits
- In rare circumstances, **the cesarean** is recommended for women with genital warts that cause obstruction in the birth canal, or in cases where vaginal delivery will result in excessive bleeding due to laceration of the warty lesions