



An Argument: The Safety of Human Papillomavirus (HPV) in Pregnancy

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Received 2019 March 08; Accepted 2019 March 08.

Keywords: HPV, Pregnancy, Vaccination

The rate of HPV infection in pregnant females is high and in case of condyloma development, rapid growth can be seen. Hormonal changes and the suppression of the immune system during pregnancy are predisposing factors. Mothers who have a latent infection or genital warts are at low-risk of the encounter with HPV transmission to neonate via oropharyngeal mucosa; hence, a critical factor for prediction of transmission is the time between the rupture of the amnion and delivery (1).

In the study by Garland et al. pregnancy and infant outcome in females who received the prophylactic quadrivalent HPV vaccine (QHPV) before pregnancy were surveyed and no significant differences were observed among them in a live birth and fetal loss or spontaneous abortion. In this study, neonatal congenital anomalies were not observed in both vaccine recipient and placebo groups. Thus according to this study, the administration of quadrivalent HPV vaccine before pregnancy does not increase fetal risk (2). In another study by Faber et al. in Denmark among females born 1975 - 1992 from nationwide health registries, pregnancy outcome and infant mortality in HPV vaccinated among 522 - 722 pregnant females were surveyed and no significant differences were reported in spontaneous abortion, stillbirth, and infant mortality (3).

Nevertheless, it is important to know that patients who are immunosuppressed, such as those with AIDS and those currently receiving immunosuppressive therapy, are more likely to develop persistent HPV infection and subsequent dysplasia and malignancy (4). Although HPV vaccination during pregnancy has its limitations, there are several studies showing that prenatal HPV infection could lead to spontaneous abortion and preterm delivery. Also, the severity of unpleasant side effects related to HPV infection in pregnancy is highly dependent on viral load (5-

7). Therefore, it seems that QHPV may eliminate or decreases the prevalence of HPV infection, especially in high-risk groups such as pregnant females. To establish the fact that adverse pregnancy outcome could be caused by HPV infection, more cohort studies should be carried out to explore an appropriate HPV vaccination program during pregnancy (8).

Acknowledgments

The author of the manuscript truly appreciates Bitia Pourkaveh for her contribution to collecting data and editing the manuscript.

Footnotes

Conflict of Interests: The author declared he had not any conflict of interests.

Funding/Support: It is not declared by the author.

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