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Commentary

Maternal Immunization: A Fundamental Strategy for Preventing Infectious Diseases

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DESCRIPTION

Maternal immunization is a critical strategy in safeguarding both maternal and neonatal health. Measles, caused by the rubeola virus, is a highly contagious disease that spreads through respiratory droplets. It can lead to severe complications, especially in pregnant women and their unborn children. Pregnant women who contract measles are at an increased risk of hospitalization, pneumonia and other severe respiratory complications. Moreover, measles infection during pregnancy is associated with adverse fetal outcomes, including miscarriage, stillbirth, preterm birth and low birth weight. Maternal immunization involves vaccinating pregnant women to protect them and their infants from infectious diseases. The concept is based on the natural transfer of antibodies from the mother to the fetus through the placenta, providing the newborn with passive immunity during the early months of life. This approach is particularly beneficial for diseases like measles, where early protection is essential. The Measles, Mumps and Rubella (MMR) vaccine is the primary preventive measure against measles. However, live vaccines like MMR are contraindicated during pregnancy due to potential risks to the fetus. Therefore, it is recommended that women receive the MMR vaccine before conception. For those who are already pregnant and lack immunity, post-exposure prophylaxis with immunoglobulin can be administered if they are exposed to measles. Measles is a highly contagious infectious disease that can lead to severe complications during pregnancy. This discussion focuses on the critical role of maternal immunization in preventing measles and examines future advancements in this area to enhance maternal and fetal health.

Healthcare providers play a vital role in assessing the measles immunity status of their patients. Pregnant women without evidence of immunity should be counselled on the importance of vaccination postpartum to protect future pregnancies. Additionally, ensuring high vaccination coverage in the community helps create herd immunity, indirectly protecting pregnant women and their infants. One of the significant challenges in maternal immunization is the reluctance or delay in vaccination due to misinformation and vaccine hesitancy. Addressing these concerns through public health education and clear communication about the safety and benefits of vaccines is essential. Maternal immunization offers the potential to safeguard against various infectious diseases beyond measles, significantly reducing health risks for both the mother and the fetus during pregnancy. For instance, vaccines against influenza and pertussis are already recommended during pregnancy and have shown to be effective in reducing the incidence of these diseases in both mothers and infants. Expanding the scope of maternal immunization to include other pathogens, such as Respiratory Syncytial Virus (RSV) and Group B Streptococcus (GBS), could further enhance maternal and neonatal health outcomes.

CONCLUSION

Global health organizations, including the World Health Organization (WHO) and the Centers for Disease Control and Prevention (CDC), emphasize the importance of maternal immunization as part of comprehensive prenatal care. Policies that support maternal immunization programs, including funding for vaccine research and development, training for healthcare providers and public awareness campaigns, are essential for the success of these initiatives. This early priming can help reduce the risk of autoimmune diseases and allergies, contributing to overall better health outcomes. Vaccine hesitancy remains a significant barrier to achieving high vaccination rates among pregnant women. Another study published in the Morbidity and Mortality Weekly Report (MMWR) highlighted that maternal vaccination during pregnancy was effective in preventing COVID-19-related hospitalizations in infants under six months of age. The study emphasized the importance of maternal vaccination in protecting infants who are not yet eligible for vaccination themselves.

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