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Topic:

The safety and immunogenicity of trivalent inactivated influenza vaccination : a study of maternal –cord blood pairs in Taiwan

Presenter: Yi-Wen, Tien MD

Background:There are little data about adverse effects and immunogenicity of flu vaccine in Asian pregnant women.

Methods:This prospective trial (NCT01514708) enrolled 46 pregnant women who received a single intramuscular dose of trivalent flu vaccine (AdimFlu-S®) containing 15 mcg of hemagglutinin for each strain/0.5 mL from influenza A (H1N1), influenza A (H3N2), and influenza B after the first trimester. Blood samples were collected at day 0 and 28 after vaccination, and at delivery. Cord blood was also collected. Hemagglutination inhibition (HAI) assays were performed to determine seroprotection and seroconversion rates and fold increase in the HAI geometric mean titer (GMT).

Results:Twenty-eight days after vaccination the seroprotection rate against H1N1, H3N2, and influenza B was 91.3%, 84.8% and 56.5%, respectively. The GMT fold increase was 12.8, 8.4, and 4.6 for H1N1, H3N2, and influenza B, respectively. At delivery, both the seroprotection rate (86.4%, 68.2%, and 47.7%) and GMT fold increase (9.4, 5.7 and 3.8) were slightly lower than day 28. The seroprotection rate and GMT fold increase in maternal and cord blood samples were comparable. No significant adverse effects were detected.

Conclusion:Trivalent flu vaccine induces a strong immune response in pregnant women and their infants without adverse effects.