

EPOSTER DISCUSSION SESSION 05: VACCINE IMMUNOLOGY - STATION E

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THE RESPONSE TO MONOVALENT, TRIVALENT OPV AND IPV AFTER TRIVALENT OPV AT BIRTH

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Background

Controversy raised on oral polio vaccine administered at birth. Benefit shown on the overall reduction of infant mortality rate and intensive immune response developed following any polio vaccination afterwards. The aim of the study is to observe the antibody response to mOPV, tOPV, IPV mono and IPV in combination after tOPV at birth.

Methods

Single blinded randomized controlled trial was done on 120 healthy normal infant age from 42 to 80 day who had tOPV before the age of 1 month. Samples divided into 4 groups, each receiving 3 doses of mOPV(P1), tOPV, IPV mono and IPV in combination. Blood samples were drawn prior the first dose, one month after the second and the third dose. The Polio neutralizing antibodies were expressed in GMT, comparison were made on the antibody response to each group.

Results

Thirtyfive percent infants had zero neutralizing antibody despite first tOPV at birth, and seroconversion after 2 doses of any Polio vaccine were 100% to all polio virus (P1,P2,P3). Seroconversion (raised fourfold or twice if the GMT over 1000) in the babies born with maternal antibody showed a slower responses but not statistically significant. Response to tOPV after 2 dose reach the highest point, but statistically not significant. GMT measured one month after the third dose had a good response except for P2 and P3 in mOPV group, which contain only P1 antigen. The good response in any vaccine is supposed due to the priming of the tOPV given early as before one month of age.

Conclusions

tOPV priming was related with a non-inferior Polio GMT result in all groups receiving either tOPV, IPV, and IPV combination. Infants with undetectable antibody prior to intervention achieved faster Polio seroprotection.

Clinical Trial Registration (Please input N/A if not registered)

N/A



CME/CPD Certificate

This is to certify that

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