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Original Article

Short Term Reactogenicity of a Triple Diphtheria-Tetanus-Whole Cell Pertussis Vaccine in Iranian Infants

S Zarei[1], *M Jeddi-Tehrani* [1, 2], *H Zeraati* [3], *AR Milanifar* [4], *A Ramazankhani*[5], *AM Alizadeh* [5], **F Shokri* [6]

[1]*Monoclonal Antibody Research Center, Avicenna Research Institute, Iranian Academic Center for Education, Culture & Research, Tehran, Iran*
[2]*Immune and Gene Therapy Lab, Cancer Center, Karolinska University Hospital, Stockholm, Sweden*
[3]*Dept. of Epidemiology and Biostatistics, School of Public Health, Tehran University of Medical Sciences, Iran*
[4]*Reproductive Biotechnology Research Center, Avicenna Research Institute, Tehran, Iran*
[5]*Dept. of CDC, Deputy of Health Affairs, Shahid Beheshti University of Medical Sciences, Tehran, Iran*
[6]*Dept. of Immunology, School of Public Health, Tehran University of Medical Sciences, Iran*

Corresponding Author:

F Shokri
Fax: +98 21 22432021, E-mail: fshokri@tums.ac.ir

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Abstract:

Background: Immunization against diphtheria, tetanus and pertussis (DTP) has long been applied in Iran using whole cell vaccine. Despite the role of whole cell DTP (DTwP) vaccine in reduction of mortality as a result of disastrous diseases such as diphtheria, tetanus, and pertussis, serious local and systemic complications have been attributed to these vaccines. This study was performed to determine the complications of DTwP vaccine in infants attending some of the health centers of Tehran in 2006-2007.

Methods: In this prospective study, 330 infants were injected with DTwP vaccine manufactured by Razi Institute of Iran. All subjects received DTwP vaccine at 2, 4, and 6 months of age following the national vaccination schedule of Iran. Reactogenicity was assessed by the parents for 7 days post-vaccination using diary cards.

Results: Of the 279 infants who completed the vaccination study, pain was the most frequent local reaction after the primary vaccination (68.1-75.3%). The mean diameters of the redness and swelling at first day post-vaccination were 2.81±6.91 and 2.60±7.93 mm in the first dose, 2.40±6.25 and 1.94±5.74 mm in the second dose and 2.24±5.66 and 2.16±6.03 in the third dose, respectively. Fever (axillary temperature >37.5° C) was the most frequently reported systemic reaction during the primary vaccination (53.8-58.8%). All systemic reactions observed after each dose were either reduced or completely disappeared during a week.

Conclusion: The high incident of complications observed following vaccination with this cellular triple vaccine may be related to the formulation or the bacterial cell fragments used in vaccine production.

Keywords:

Diphtheria-Tetanus-Pertussis Vaccine ، *Vaccination* ، *Reactogenicity* ، *Infant* ، *Local reaction* ، *Systemic reaction* ، *Iran*

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