

Hsiu-Chen Lin, MD
Han-Hsing Deng, MD
Hsun-Hui Hsu, MD, PhD
Department of Pediatrics, Taipei
Medical College Hospital

Prophylactic Effect of Acetaminophen on Adverse Reactions in Infants after DTP Vaccination

Key Words

Acetaminophen
DTP vaccine
Adverse reactions

ABSTRACT

Fever, local reactions, and other systemic symptoms frequently occur following diphtheria-tetanus-pertussis (DTP) vaccination. These reactions are usually minor and self-limiting but are of major concern to parents.

The effect of acetaminophen on reducing the frequency and severity of adverse reactions following DTP vaccination was investigated in a double-blind randomized study. We collected data from study subjects from May 1996 through February 1997. This clinical trial included results after the vaccination of 412 healthy infants from 2 to 18 months of age. These infants received scheduled vaccinations of doses 1, 2, and 3, and a booster of DTP-OPV vaccine (dose 1, n = 126; dose 2, n = 105; dose 3, n = 90; booster, n = 91). They randomly received 2 doses of either a placebo (n = 203) or acetaminophen (n = 209). Rectal temperatures were measured by the parents 5 times after vaccination. Reports of the systemic and local reactions of the subjects were also obtained. There were no statistically significant differences between the treated and control groups in the incidence of fever (59.2% vs. 63.6%). There were no significant differences between the 2 groups at 2, 4, 6, and 18 months of age, as to the frequencies of systemic reactions (fretfulness, crying, drowsiness, anorexia, vomiting) and local reactions (pain, redness, swelling) of the infants after DTP polio vaccination. Our conclusion is that acetaminophen has no prophylactic effect on the adverse reactions to DTP-OPV vaccination. (N. Taipei J. Med. 2000; 2:131-136)

INTRODUCTION

Although adverse effects including fever, local reactions, and systemic reactions have frequently been associated with the use of the diphtheria-tetanus-pertussis (DTP) vaccine, the rate of adverse reactions due to the vaccine has never been accurately determined in

Taiwan. It is a common practice for pediatricians to instruct parents to give their children acetaminophen for post-immunization fever or pain. Some pediatricians routinely recommend giving children acetaminophen after DTP vaccination, even before the onset of any symptoms.

A report by Ipp and Gold¹ showed that prophylactic administration of acetaminophen reduced some ad-