CLIPPINGS

2nd Booster Dose of DTaP in Thigh Causes Less Pain Than in Arm (*Pediatrics 2011; 127: e581-e587*)

As per the current recommendations, the deltoid muscle is the preferred site for intramuscular vaccinations given to children aged 1 year and older. A retrospective study in USA with 233,616 children aged 4-6 years was done to compare the risk for local reactions requiring medical attention to the 2nd booster dose of DTaP vaccine. In all, 0.4% had a confirmed medically attended local reaction to the fifth, i.e. 2nd booster dose of the DTaP vaccine. The rate of those reactions was significantly higher with vaccinations given in the arm (47.4 per 10000 vaccinations) compared with vaccinations given in the thigh (32.1 per 10000 vaccinations) (P <.001). In a multivariable analysis adjusted for age, gender, and study site, children vaccinated in the arm had a 78% higher risk of a local reaction.

So, it is clear that even though the local reactions to the 2nd booster dose of the DTaP vaccine that require medical evaluation are uncommon, the risk of those reactions is significantly higher when the vaccine is injected in the arm. These findings suggest that the thigh should be considered as an acceptable site of injection for this vaccination.

Fever and Antipyretic Use in Children (*Pediatrics 2011; 127: 580-587*)

Fever is one of the most common symptoms, taken seriously by doctors and parents alike. Many parents administer antipyretics even when there is minimal or no fever, to maintain a "normal" temperature. Recently, AAP has come out with a new guideline to treat fever in pediatric patients. According to the study authors, there is "no evidence that reducing fever reduces morbidity or mortality from a febrile illness" or that it decreases the recurrence of febrile seizures. The guideline outlines strategies to counsel caregivers about treating febrile illness, stating that acetaminophen and ibuprofen, "when used in appropriate doses, are generally regarded as safe and effective agents in most clinical situations." The appropriate dosing for acetaminophen is 10 to 15 mg/kg per dose given every 4 to 6 hours orally, which produces an antipyretic effect within 30 to 60 minutes in approximately 80% of children. The appropriate dosing for ibuprofen is 10 mg/kg per dose. The study warns against the use of combination therapy with acetaminophen and ibuprofen because this approach may place infants and children at increased risk for dosing errors and adverse outcomes.

Redefining Outcome of First Seizures by Acute Illness (*Pediatrics. 2010; 126(6): e1477-84*)

In this prospective longitudinal study of children who presented with a first-time seizure, researchers investigated the viral etiology of associated infectious illnesses and sought to determine the risk of recurrent seizures stratified by fever and type of illness. Children (aged 6 months to 6 years) were enrolled at the time of evaluation for their first seizure and followed monthly for up to 5 years. Children with nonfebrile illness seizures were more likely than those with febrile seizures to have acute gastroenteritis (47% and 28%, respectively; P = .05). No significant differences in seizure recurrence were found between children with or without a fever at first seizure. Children with acute gastroenteritis at first seizure, regardless of fever, had a lower risk of seizure recurrence compared with children with other acute illnesses (hazard ratio: 0.28; 95% confidence interval: 0.09-0.80). This study confirms the role of gastrointestinal illness as a distinguishing feature in childhood seizures. Children with this distinct presentation have a low rate of seizure recurrence and few neurologic complications.

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