

**Were early vaccine administration and
teething risk factors in this case?**

To the Editor:

I have some questions regarding the Case of the Month article in the April issue. The patient's age is stated as 11 months at the time of presentation with intussusception, 1 week after receiving a series of immunizations, including the measles-mumps-rubella (MMR) vaccine.

According to the Advisory Committee on Immunization Practices and the American Academy of Pediatrics, the minimum age for receiving the MMR vaccine is 12 months. Is there any evidence that early administration of MMR was a risk factor for developing intussusception?

Also, the writer mentions that the vaccine was administered during "active teething." In my 27 years of experience as a PA in pediatrics, I do not recall teething as a contraindication to receiving immunizations. The teething period extends from infancy into toddlerhood. Is there scientific documentation of risks involved with administering vaccines while teething? If so, immunizations should be postponed until after the child's second birthday.

Joyce Gibbons, PA-C

Author's reply:

Although no official studies shown in the literature regard teething as a contraindication to immunizations, teething theoretically taxes the immune system as an inflammatory response is formed in the gums. Any decrease in immunity increases the risk of difficulty with overcoming a concomitant infection, which in reality is what an immunization presents to the system.

I would not recommend deferring immunizations secondary to teething; however, I would tread cautiously during the very active stages, especially if the infant seems to be particularly bogged down by the teething (ie, febrility, loose stools, etc).

I do not believe that administration of the MMR vaccine 1 month earlier than the recommended age was a risk factor for this patient's intussusception, per se.

Michelle Jacobs, RPA-C
Bronx, New York

From a JAAPA editorial board member:

I am surprised by the statement, "teething theoretically taxes the immune system as an inflammatory response is formed in the gums." In my 31 years of practice, I have never

come across the notions that teething decreases the body's ability to fight off infection and that the act of immunization introduces infection into the body. Vaccines contain antigenic particles, microscopic strands of protein that induce an immune response, where the body generates antibodies against the agent that causes the disease. "Live virus" vaccines—the MMR and the rotavirus vaccine—are both attenuated; the viral particles are weakened to the point where they don't produce disease in persons with healthy immune systems.

I have never heard of breaking teething down into stages, certainly nothing like a "very active stage," which might cause a clinician to consider withholding administration of vaccines. If a child is in the throes of an active infection that results in high fever, withholding vaccine administration might be prudent and is at the discretion of the clinician; but teething itself does not cause high fever in the infant or toddler. The only thing that teething produces is teeth.

The AAP and ACIP both recommend that the MMR vaccine be given after the first birthday. There is evidence that administering the MMR before the child is 12 months of age produces a suboptimal immune response. I know of no correlation between the administration of MMR vaccine and intussusception. Years ago there was a suggestion of a correlation between one of the early rotavirus vaccines and intussusception. The correlation was never substantiated, but the vaccine was subsequently withdrawn from the market.

Brian T. Maurer, PA-C
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Induced therapeutic hypothermia truly is a lifesaver

To the Editor:

I would like to attest to the effectiveness of hypothermia in cardiac arrest ("Use of mild therapeutic hypothermia improves outcomes in cardiac arrest," published in March 2010, p 43-48). My 49-year-old husband had a cardiac arrest in October of 2009.

Down time was estimated at 8 to 20 minutes. After 7 shocks and 45 minutes of resuscitation, a rhythm was achieved. He was whisked up to ICU and started on the hypothermic protocol that was just recently initiated at our hospital—he was their first patient!

As a PA, I have never seen such a quick recovery. You could see his neurologic improvement literally by the hour. In less than 6 weeks, my husband returned to work. And in December, for his 50th birthday, he went to a Buffalo Bills game to celebrate the team's 50 years as an organization.

I hope that more hospitals incorporate this protocol. It is not expensive to run and it *is* lifesaving!

Tatiana Mazur, RPA
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