Hypotonic-hyporesponsive episode (HHE)

Hypotonic-hyporesponsive episode (HHE) is an uncommon reaction to diphtheria, tetanus and pertussis-containing vaccines (and even more rarely to other vaccines). HHE occurs much less frequently following administration of acellular pertussis vaccines (aP) than with the older whole cell pertussis (wP) vaccines which were used in New Zealand until 2000. While an HHE may appear alarming at the time, research shows it does not result in any long term sequelae.

Signs and symptoms of HHE

The event is characterised by a sudden episode of limpness and unresponsiveness within 12 hours of receiving a vaccine. The average duration of the episode usually ranges from 1-30 minutes, but may last longer. For the event to be considered an HHE, all of the following must be present: limpness, unresponsiveness, pallor and cyanosis. Shallow breathing can also occur.

Rate of occurrence

An HHE is five times more likely to occur after the older whole cell pertussis vaccine than with an acellular pertussis vaccine. Most reported cases affect infants and children under 2 years of age and usually only with the first vaccination event. HHE occurred 5 - 8 per 10,000 following the older whole cell DTP vaccinations.

Sequelae

An HHE always fully resolves. No adverse outcomes have been observed after these episodes. Children who have experienced an HHE following a pertussis-containing vaccine have not demonstrated evidence of neurological damage or intellectual impairment. Research shows that it is very rare for a child to experience a second HHE in a child when immunisation is continued.

Follow-up care

An HHE should always be reported to the Centre for Adverse Reaction Monitoring (CARM) by the health care professional, parent or both. A documented episode constitutes a precaution (rather than a contraindication) for further doses of the vaccine involved. The affected child should be referred to their GP for assessment. A detailed record of the event should also be recorded into the child's clinical notes.

Re-vaccination

Following an HHE the immunisation programme should be completed. Having an HHE is not a reason to delay the next scheduled immunisation.

For further information contact the Immunisation Advisory Centre: 0800 IMMUNE or (0800 466 863).

To report an HHE contact CARM at: http://carm.otago.ac.nz/index.asp?link=news&item=19

References