Vasovagal episode during immunisation – A Case Study

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A 12-year-old boy presented for Year 7 immunisation at the gym in his school. After waiting in line he stepped behind the screen and, still standing, received his Gardasil® and Varilrix® injections from the nurse immuniser in each arm simultaneously.

Within a minute the boy had become pale and clammy with a fixed stare. Nursing staff lay the boy down. He briefly lost consciousness and had approximately five to 10 seconds of stiffness and back arching. Nursing staff elevated the boy’s legs and he quickly regained consciousness. Nursing staff observed the boy for another hour. His mother collected him from school shortly after this and reported later that he remained a bit vague for another hour. The mother recalled that her son had had a similar reaction during immunisation when he was four years old.

Definition

A vasovagal episode (faint) is mediated by vagus nerve stimulation. Onset is immediate, usually during or within five minutes of vaccine administration. It is the most common and immediate adverse event following immunisation in adolescents and adults, with a peak age incidence of 15 years.

Signs and symptoms of a vasovagal episode

- Skin – generalised pallor, cool and clammy
- Respiratory – normal respirations (may be shallow but not laboured)
- Cardiovascular – bradycardia, weak or absent peripheral pulses but a strong carotid pulse
- Hypotensive – usually transient and corrected in supine position
- Neurological – faint or light-headed sensations, loss of consciousness, improves once supine
- Gastrointestinal – nausea and/or vomiting

Discussion

As an immunisation provider you should be able to distinguish between a vasovagal episode and anaphylaxis. See the Australian immunisation handbook, Table 2.3.1 entitled Clinical features that may assist differentiation between a vasovagal episode and anaphylaxis.

This case highlights the importance of preventing a vasovagal episode by the following interventions:

- clients should be seated during vaccine administration
- clients should be advised to have something to eat and drink prior to vaccination
- clients who have a history of a vasovagal episode should lie down five minutes prior, during and after vaccine administration for a period of 15 to 30 minutes
• adults should avoid driving for at least 30 minutes after vaccination.