

2 VACCINE-PREVENTABLE DISEASES

a Tetanus in an unvaccinated 11-year-old child from Free State Province

In August 2016, an 11-year-old child presented to a Free State district hospital with a two-day history of generalised body pain, particularly in her trunk and back. She was also experiencing episodes of spasms and cramps which were initially thought to be seizures. However an experienced doctor observed that she remained fully alert during the episodes, and suspected tetanus. The patient was referred to a tertiary hospital where a clinical diagnosis of tetanus was made.

On admission, the patient was acutely ill, in opisthotonus, had a clenched jaw and increased oral secretions. A healing wound with scar tissue was found on the sole of her foot. Tetanus toxoid and immunoglobulin were administered. She was lethargic, and during spasms, she developed laryngospasm and became hypoxic. Benzodiazepines were initiated but frequent spasms necessitated muscle relaxation and intubation. Excessive secretions threatened airway (endotracheal tube) patency and she developed obstructive apnoea and respiratory acidosis. She developed cardio-respiratory arrest on two occasions, necessitating reintubation and cardio-pulmonary resuscitation.

While in ICU she developed generalised convulsions. Autonomic instability with severe hypertension (systolic blood pressures reaching 200 mmHg) was managed with amlodipine and labetalol. Other

complications included urinary tract infection (*Enterococcus*), multiple ventilator-associated pneumonias (*K. pneumoniae*, *Pseudomonas*, *A. baumannii* only sensitive to colistin) and two failed extubation attempts after 4 weeks' ventilation. Six weeks after admission she was extubated and had a tracheostomy inserted in October 2016.

Week eight post-admission, the patient is in the general ward, alert and able to communicate. Despite daily physiotherapy and occupational therapy she has developed contractures, lost muscle mass and will require intensive rehabilitation. Full recovery is expected to take months.

On detailed enquiry, it was established that the patient's 'Road to Health Card' had been lost, and apparently no immunisations had ever been given. A catch-up programme of immunisation will be administered prior to discharge, including diphtheria-tetanus vaccine (Tdap-IPV, if possible), measles, hepatitis B, and the 13-valent conjugate pneumococcal vaccine.

This case highlights the importance of adherence to the expanded programme of immunisation, and clinician awareness regarding the diagnosis and management of tetanus.

Source: Attending clinicians.