40

A 62-Year-Old Woman from Ethiopia With Difficulty Eating

CHRISTOPHER J.M. WHITTY

Clinical Presentation

History

A 62-year-old woman from rural Ethiopia had flown to Europe to visit her daughter and meet her new grandchild. She was normally fit and well and very physically active, because she worked on her smallholding in Ethiopia. Three days after arrival she began to find it difficult to chew, with what she described through her daughter as 'stiffness of the mouth'. This had never happened before.

Clinical Findings

No abnormal findings are discovered on examination. Her pulse, blood pressure and respiratory rate are within normal limits.

Questions

1. What are the important differential diagnoses and what would help establish the diagnosis?
2. What is the immediate management?

Discussion

A 62-year-old woman from Ethiopia presents with difficulties chewing. She has been fit and well in the past. Her physical examination is unremarkable.

Answer to Question 1

What Are the Important Differential Diagnoses and What Would Help Establish the Diagnosis?

Although there is a range of possible causes of stiffness on mastication, the main cause from less developed countries is early tetanus. The risk factors are agricultural work and being from a country and age group in which vaccination is unlikely to have occurred. An important differential for trismus in older people is giant cell arteritis (GCA), and an ESR should be performed on this woman to exclude GCA as a matter of urgency, although she is towards the lower end of the age range for this.

The diagnosis of tetanus is purely clinical. Generalized tetanus with spasms is easy to diagnose once it is established, but it is usually preceded by trismus because the muscles of mastication have the shortest motor neurons.

Answer to Question 2

What is the Immediate Management?

The initial treatment for any possible tetanus is to give an antibiotic (metronidazole is the antibiotic of choice) to kill the infection and prevent more toxin production, and an antitoxin injection to neutralize circulating tetanospasmin. The earlier this is undertaken the better the outlook; therefore it is better to over-suspect tetanus than to wait until spasms make the diagnosis obvious.

The time between the high-risk injury and the first symptoms is a guide to prognosis but often it is not known, especially in agricultural populations who may sustain high-risk injuries (which may be minor) regularly.

The Case Continued…

The woman received metronidazole and antitoxin on day 1. On day 2 she presented again, having had two generalized spasms. Over the next 2 days she was nursed in a dark, quiet environment, but her spasms increased in frequency, severity and duration over the next 5 days and she developed dysphagia. She was treated with diazepam and antitoxin was administered intrathecally. A prophylactic tracheotomy was performed because of the risk of laryngeal spasms, the commonest cause of sudden death in tetanus. Her symptoms got no worse after 7 days; she did not have to be paralysed and ventilated, and her respiration was not severely compromised at any point. She made a slow recovery over 3 weeks, and was still experiencing stiffness when seen in clinic 3 months later.

SUMMARY BOX

Tetanus

Severe tetanus is a terrible disease both to have and to witness. Some tetanus stops at trismus, but most will go on to generalized spasms. As these become more severe, respiratory function is compromised; and in the most severe cases, there is autonomic dysregulation with rapid swings in blood pressure, heart rate and pulse. There is a wide variation in the mortality from established generalized tetanus between different units, demonstrating that proper medical and nursing care have a significant influence on outcome. Wounds require meticulous cleaning and debridement. After the initial antibiotics, antitoxin and diazepam (for spasms), it is essential to assess the stage of the patient regularly. Tetanus toxin already in the motor nerves will not be affected by antitoxin and will continue to track to the spinal cord, therefore patients generally continue to deteriorate for several days after initial presentation and treatment. Intrathecal antitoxin should be considered in severe cases. In survivors, the disease then plateaus before a slow recovery. Most deaths are either from laryngeal spasm (rapid), respiratory arrest in prolonged spasms, cardiac dysrhythmia or chest infection. Increased respiratory rate (over 40 breath cycles per minute) or difficulty swallowing should make the treating physician consider the risk of laryngeal spasm and prepare the patient for either elective tracheotomy or paralysis and ventilation in the intensive care unit (ICU). Because of the protracted course of tetanus, weaning from ventilators once started is slow and difficult, with all the complications that a prolonged stay in an ICU brings.

Further Reading

1. Thwaites C, Yen LM. Tetanus. In: Farrar J, editor. Manson's Tropical Diseases. London: Elsevier; 2013.
2. Rodrigo C, Fernando D, Rajapakse S. Pharmacological management of tetanus: an evidence-based review. Crit Care 2014;18:217.
3. Thwaites CL, Beeching NJ, Newton CR. Maternal and neonatal tetanus. Lancet 2015;385:362–70.
4. Yen LM, Thwaites CL. Tetanus. Lancet 2019;393:1657–68.
5. Pollach G, Goddia C, Namboya F, Luiz T, Rothe C. Severe tetanus in Malawi: where are the female patients? J Public Health 2016; 24(5):401–8.