



## CLINICAL DISEASE: PERTUSSIS



Pertussis is a devastating, infectious disease of the mucous membrane that lines the respiratory tract, caused by the bacterium *Bordetella pertussis*. Although pertussis may occur at any age, most cases of serious disease and the majority of fatalities are observed in infancy. The disease is also called whooping cough because of the characteristic whoop sound produced following a bout of continuous short coughs without the intake of air. The bacteria are transmitted by aerosolised droplets and colonise the ciliated respiratory epithelium of a susceptible individual. After an incubation period ranging from 6 to 20 days, the disease process that has three stages begins. Each stage lasts from 1 to 3 weeks:

### 1. Catarrhal phase

Initial symptoms are non-specific. Fever is absent or low throughout the course of the disease. There may be coryza-like symptoms coupled with a mild, dry cough, which progresses in both frequency and severity and within two weeks becomes paroxysmal. During this stage, large numbers of the organisms are shed in aerosolised droplets, and the patient is highly infectious.

### 2. Paroxysmal phase

During this stage the characteristic whoop sound occurs. A paroxysm is a series of up to ten short coughs without inspiration, during which it appears as if the respiratory tract has been emptied of air. The whoop is produced by the initial attempt to inspire through a glottis narrowed by spasms. During paroxysms, cyanosis, vomiting and haemorrhages of the nose, eyes and rarely, the brain, may occur.

### 3. Recovery phase

If the paroxysmal stage does not lead to complications, recovery begins. Paroxysms become less frequent, vomiting is occasional and the whoop disappears.

Inability to eat or retain food may result in malnutrition, rendering the individual susceptible to secondary infections, which are the main complications of pertussis, otitis media and bronchopneumonia being the most common. Pertussis can also lead to deafness and other permanent damage. A rare complication is the serious and potentially fatal condition of encephalitis.

#### Where to find us:

South African Vaccination and Immunisation Centre (SAVIC)  
PO Box 173, University of Limpopo – Medunsa Campus  
0204, PRETORIA, Gauteng Province, South Africa

Tel: + 27(12)521 3077, Fax: + 27(12)521 4284, Email: [info@savic.ac.za](mailto:info@savic.ac.za); <http://www.savic.ac.za>