

بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

In the name of **ALLAH**
the most Beneficent and the most merciful



COMMUNICABLE DISEASES-4

WHOOPING COUGH (PERTUSSIS)

WHOOPING COUGH (PERTUSSIS)

- An acute infectious disease usually of young children
- It is caused by *B. pertussis*
- It is characterized by an insidious onset with mild fever and an irritating cough, gradually becoming paroxysmal with the characteristic “whoop”(loud crowing inspiration) cyanosis/vomiting

WHOOPING COUGH (PERTUSSIS)

- The spectrum of the disease varies from severe illness to atypical and mild illness without whoop
- The Chinese call it a “hundred days cough”
- Whooping cough occurs in all countries
- It occurs endemically and epidemically

WHOOPING COUGH (PERTUSSIS)

- It is one of the most lethal diseases of infants and young children who have not been immunized, particularly those with underlying malnutrition, and other respiratory infections such as pneumonia
- Case fatality rates in developing countries range from 4-15 per cent in infants

WHOOPING COUGH (PERTUSSIS)

AGENT FACTORS

AGENT: The causative agent is *B. pertussis*, which occurs in smooth and rough phases, capsulated and non-capsulated forms, and elaborates an exotoxin and endotoxin. The bacteria survive only for very short periods outside human body. It infects man only.

WHOOPING COUGH (PERTUSSIS)

(AGENT FACTORS)

SOURCE OF INFECTION: A case of pertussis. Most often the source may be mild, missed or an unrecognized case.

There are no subclinical cases or chronic carriers

INFECTIVE MATERIAL: Nasopharyngeal and bronchial secretions & objects freshly contaminated with such discharges

WHOOPING COUGH (PERTUSSIS)

(AGENT FACTORS)

INFECTIVE PERIOD: It may be considered to extend from a week after exposure to about 3 weeks after the onset of paroxysmal stage. Whooping cough is most infectious during catarrhal stage

SECONDARY ATTACK RATE: Averages 90 % in the unimmunized household contacts

WHOOPING COUGH (PERTUSSIS)

HOST FACTORS

AGE: Whooping cough is primarily a disease of infants and preschool children. The highest incidence is found below the age of 5 years. Infants below 6 months have highest mortality

WHOOPING COUGH (PERTUSSIS)

(HOST FACTORS)

SEX: Incidence and fatality are observed to be more among female than male children

IMMUNITY: Recovery from whooping cough or adequate immunization is followed by immunity. Maternal antibodies do not protect newborn

WHOOPING COUGH (PERTUSSIS)

ENVIRONMENTAL FACTORS

Pertussis occurs throughout the year, but the disease shows a seasonal trend with more cases occurring during winter and spring months, due to overcrowding.

Socio-economic conditions and ways of life also play a role in its occurrence.

WHOOPING COUGH (PERTUSSIS)

TRANSMISSION : Droplet infection and direct contact are main modes of spread. The role of fomites in the spread of infection appears to be very small, unless freshly contaminated

INCUBATION PERIOD : Usually 7-14 days, but no more than 3 weeks

WHOOPING COUGH (PERTUSSIS)

CLINICAL COURSE

- Pertussis produces a local infection
- The illness generally lasts 6-8 weeks
- Three stages are described in the clinical cases:

WHOOPING COUGH (PERTUSSIS)

(CLINICAL COURSE)

- a. Catarrhal stage: It lasts for about 10 days. It is characterized by its insidious onset, lacrimation, coryza, sneezing, anorexia, malaise and a hacking night cough that becomes diurnal

WHOOPING COUGH (PERTUSSIS)

(CLINICAL COURSE)

b. Paroxysmal stage: It lasts for 2-4 weeks. It is characterized by bursts of rapid consecutive coughs followed by a deep high pitched inspiration (whoop). It is usually followed by vomiting. In young infants it may cause cyanosis and apnoea

WHOOPING COUGH (PERTUSSIS)

(CLINICAL COURSE)

c. Convalescent stage: lasting 1-2 weeks

WHOOPING COUGH (PERTUSSIS)

COMPLICATIONS

These are bronchitis, bronchiectasis, bronchopneumonia, haemoptysis, epistaxis, subconjunctival haemorrhages and cerebral punctate haemorrhages which may cause convulsions and coma. Bronchopneumonia is the most prominent problem with high mortality

WHOOPING COUGH (PERTUSSIS)

CONTROL

CASES: General principles are:

- Early diagnosis
- Isolation
- Treatment of cases
- Disinfection of discharges from nose and throat

WHOOPING COUGH (PERTUSSIS)

(CONTROL)

Early diagnosis is only possible by examination of nose and throat secretions, which may be obtained by nasal or pharyngeal swabs, in laboratory.

Isolation: The patient should be isolated until considered to be non-infectious

WHOOPING COUGH (PERTUSSIS)

(CONTROL)

Treatment of cases: Although several antibiotics are effective against *B. pertussis*, Erythromycin is the drug of choice . Other alternatives are ampicillin, cotrimoxazole (septran) or tetracycline. Antibiotics may prevent or moderate clinical pertussis when given during incubation period or in early catarrhal stage

WHOOPING COUGH (PERTUSSIS)

(CONTROL)

CONTACTS: Infants and young children should be kept away from cases.

Contacts may be given 10 days course of antibiotic (erythromycin or ampicillin) prophylactically.

WHOOPING COUGH (PERTUSSIS)

(CONTROL)

ACTIVE IMMUNIZATION

National policy is to immunize against diphtheria pertussis and tetanus simultaneously with DPT/Penta vaccine (0.5 ml) given I/M to all infants at the age of 6 weeks, 10 weeks and 14 weeks

WHOOPING COUGH (PERTUSSIS)

UNTOWARD REACTIONS OF VACCINATION

- Local reactions/fever/irritability
- Persistent screaming
- Convulsions/seizures
- Anaphylactic shock
- Hypotonic hypo-responsive episodes
- Very rarely encephalopathy

WHOOPING COUGH (PERTUSSIS)

CONTRAINDICATIONS OF VACCINATION

- H/O convulsions/CNS disorders
- H/O reaction to DPT/Penta vaccination
- H/O Anaphylactic reaction
- Personal or family H/O epilepsy
- Any febrile disease until fully recovered
- Encephalopathy

Thank you

