
بسم الله الرحمن الرحيم
In the name of ALLAH
the most Beneficent and the most merciful

COMMUNICABLE DISEASES-4

MENINGOCOCCAL MENINGITIS

MENINGOCOCCAL MENINGITIS

- It is also called cerebro spinal fever
- It is an acute communicable disease caused by N. meningitidis
- Meningitis is part of a septicaemic process

MENINGOCOCCAL MENINGITIS

- It usually begins with intense headache, vomiting and stiff neck & progresses to coma in a few hours
- The fatality of typical untreated case is about 80%

MENINGOCOCCAL MENINGITIS

- With early diagnosis and treatment, case fatality rates have declined to less than 10%
- Distribution is world-wide occurring sporadically and in small outbreaks in most parts of the world

MENINGOCOCCAL MENINGITIS

EPIDEMIOLOGY

(a) AGENT: N. meningitidis is a gram-negative diplococcus. It is a delicate organism; it dies rapidly on exposure to heat and cold. Twelve serotypes have been identified viz. Groups A, B, C, 29 E, H, I, K, L, W135, X, Y, Z based on structure of polysaccharide capsule

MENINGOCOCCAL MENINGITIS

(AGENT) The majority of invasive meningococcal infections are caused by the organisms of serotype A, B, C, X, W135 and Y. Meningococci of these serogroups have the potential to cause both endemic disease and outbreaks

MENINGOCOCCAL MENINGITIS

(b) SOURCE OF INFECTION: The organism is found in nasopharynx of cases and carriers. Carriers are the most important sources of infection. 4-35% of normal population may harbor the organism in the nasopharynx. During epidemics, the carrier rate may go up to 70-80%

MENINGOCOCCAL MENINGITIS

(c) PERIOD OF COMMUICABILITY:

Until the organisms are no longer present in discharges from nose and throat. Cases rapidly lose their infectiousness within 24 hours of specific treatment.

MENINGOCOCCAL MENINGITIS

(d) AGE AND SEX: It is predominantly a disease of children and young adults of both sexes. However all ages are susceptible.

(e)IMMUNITY: It is acquired by subclinical infection (mostly), clinical disease or vaccination. Infants derive passive immunity from their mothers.

MENINGOCOCCAL MENINGITIS

(f) ENVIRONMENTAL FACTORS:

Outbreaks occur more frequently in the cold and dry months of the year from December to June. Overcrowding is an important predisposing factor. The incidence is also greater in the low socio-economic groups living under poor housing conditions

MENINGOCOCCAL MENINGITIS

(g) TRANSMISSION: The disease spreads mainly by droplet infection. The portal of entry is the nasopharynx.

INCUBATION PERIOD: Usually 3-4 days, but may vary from 2-10 days

MENINGOCOCCAL MENINGITIS

CLINICAL COURSE

Most infections do not cause clinical disease. Many infected people become asymptomatic carriers and serve as source/reservoir of infection for others. Susceptibility to meningococcal disease in general, decreases with age

MENINGOCOCCAL MENINGITIS

(CLINICAL COURSE)

The disease has a sudden onset of intense headache, fever, nausea, vomiting, photophobia, stiff neck and various neurological signs

MENINGOCOCCAL MENINGITIS

(CLINICAL COURSE)

The disease is fatal in 5-10% of cases even with prompt antibiotic treatment in good health care facility. 15-20% of survivors have permanent neurological sequelae. Meningococcal septicaemia causes circulatory collapse and death

MENINGOCOCCAL MENINGITIS

PREVENTION AND CONTROL

a) **Cases:** Treatment with antibiotics can save the lives of 95% of patients, provided that it is started within first two days of illness. The isolation of cases is of limited usefulness in controlling epidemics because the carriers outnumber cases.

MENINGOCOCCAL MENINGITIS

(PREVENTION AND CONTROL)

b) **Carriers:** Powerful antibiotics (e.g. rifampicin) are needed to eradicate the carrier state.

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c) **Contacts:** Close contacts, of persons with the disease, have a 1000 times increased risk of developing meningitis.
Chemoprophylaxis has been suggested for them. Antibiotics effective for this purpose include rifampicin (600 mg twice-a-day for 2 days), ciprofloxacin, ceftriaxone and azithromycin.

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d) MASS CHEMOPROPHYLAXIS:

It is recommended for closed and medically supervised communities. It causes an immediate drop in the incidence rate of meningitis and in the proportion of cases

MENINGOCOCCAL MENINGITIS

IMMUNIZATION

Effective vaccines prepared from purified Group A, Group C, Group Y, and Group W135 meningococcal polysccharides are now available. These vaccines may be monovalent or polyvalent.

MENINGOCOCCAL MENINGITIS

(IMMUNIZATION)

It takes about 10-14 days for immunity to develop. Immunity lasts for about 3 years. It is estimated that mass vaccination campaign, for outbreak control, can avoid 70% of cases


Thank You