AJPMHS GLOBAL RESEARCH NETWORK

AMERICAN Journal of Pediatric Medicine and Health Sciences
Volume 02, Issue 03, 2024 ISSN (E): 2993-2149

Meningococcal Infection Modern Course

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Abstract: In today's article Meningococcal infection is caused by meningococci. It usually infects young children and is transmitted by airborne droplets from a sick person to a healthy person.
Meningococcal meningitis is an inflammation of the meninges and spinal cord

Key words: Meningococcal, infection, meningococci, Meningococcal infection through air-droplet

Meningococcus (wool meninx, raeningos - brain shell and koccos - grain) is a microorganism that causes epidemic cerebrospinal meningitis; It belongs to cocci, it has a double spherical (diplococci) appearance. M. belongs to the Neisseria genus of the Neisseriaceae family. Pure culture of M. (Neisseria meningitidis) was isolated by the Austrian scientist A. Wekselbaum in 1887 from the spinal fluid of a patient with meningitis. M. are resistant to the effects of external environment and disinfectant solutions. Animals are resistant to M. under natural conditions. Mainly groups A and B of M. are common. Basic rules about meningococcal infection

Meningococcal infection is caused by meningococci. It usually infects young children and is transmitted by airborne droplets from a sick person to a healthy person.
Meningococcal meningitis is an inflammation of the meninges and spinal cord. It starts suddenly with a severe headache, fever, morning sickness, vomiting, increased sensitivity to light, and neck muscle tension. Hemorrhagic rashes appear in meningococcal sepsis.
Meningococcal bacteria cause sepsis (blood contamination), which is very severe and often fatal.
Meningitis vaccine creates collective immunity among children of two years of age and provides good protection among children. Meningococcal infections are extremely dangerous for young children, and older children and adults can also be infected. Children under 5 years of age are at risk. A characteristic feature of meningococci is that they have a protective capsule, and small

children (1-5 years old) cannot develop effective immunity against natural infections. Therefore, this disease mainly affects young children. The rate of infection is 20 percent, that is, every fifth child who comes into contact with the patient becomes infected.
Symptoms usually appear 4 days after infection, but can vary from 2 to 10 days.

Meningococcal infection occurs in several forms:

nasopharyngitis - the disease takes the form of a runny nose;
meningitis - inflammation of the meninges and the entry of bacteria into the brain;
meningococcal sepsis - infection of bacteria into the blood.
Meningococcal meningitis begins with a runny nose, followed by severe symptoms such as headache, fever, nausea, vomiting, increased sensitivity to light, and stiff neck muscles. Often, the disease passes quickly and ends with the death of the patient. Meningococcal sepsis is characterized by an increase in body temperature for 1-3 days, bleeding (internal bleeding, small dots of blood on the skin), psycho-emotional disorders (coma, sopor, various speech and agitation). Severe intoxication (poisoning with decomposition products of meningococcal bacteria) quickly leads to respiratory, heart-vascular system disorders, shock and death. Meningococcal meningitis has a mortality rate of 10%, and meningococcal sepsis has a mortality rate of 50-70%.
The risk group includes children under 5 years of age. A characteristic feature of meningococci is that they have a protective capsule, and small children (1-5 years old) cannot develop effective immunity against natural infections. Therefore, this disease mainly affects young children. The rate of infection is 20 percent, that is, every fifth child who comes into contact with the patient becomes infected.
Oligophrenia (mental retardation), deafness, paralysis, and convulsions are observed in 10-20 percent of meningococcal meningitis survivors. Treatment of meningococcal infections In case of meningococcal meningitis, in order to determine the causative agent of the disease, a clinical examination with a spinal cord puncture is performed and a primary diagnosis is made. Because meningococcus is a bacterium, it is effectively treated with antibiotics such as ceftraxone, chloramphenicol, and penicillin. Meningococcal infections are extremely dangerous, and each case is a medical emergency, and the patient should be admitted to the hospital. According to capsular polysaccharide antigens, meningococcus is divided into 12 serogroups. The increase in morbidity is associated with changes in circulating serogroups. Strains of serogroup A cause epidemics, serogroups B, C and Y spread sporadically. An epidemic can be stopped by vaccinating 80 percent of the population. To protect against meningococci, there are two types of vaccines containing antigens of different meningococcal serogroups: Polysaccharide vaccines (2,3 and 4-valent).
Conjugated vaccines against meningococcal group C. Types of vaccines Purified bacteria with a polysaccharide capsule; bivalent, trivalent, tetravalent.

Number of doses

1. Vaccination calendar

2 years and adults

Buster dose

A single dose is 3-5 years old for the risk group

One dose after 3-5 years for the risk group

Circumstances that cannot be used

Anaphylaxis or hypersensitivity (allergy) detected after receiving a previous dose

Side effects

Severe: anaphylaxis (rare)

Mild: reaction at the injection site, increased body temperature

Special precautions

Children under 2 years of age may not be protected by this vaccine

Dose

0.5 ml

Injection site

Shoulder

Type of injection

Under the skin

Save

From +2°C to +8°C.
Number of doses

Purified bacteria with a protein-carrying polysaccharide capsule; monovalent; tetravalent.

Vaccination calendar

1 or 2 - see the calendar below

Calendar -

monovalent conjugated MenA

9-18 months one dose (5μg)

Calendar -

monovalent conjugated MenS

One dose for 12 years and older

2 doses at 2-11 months (8 weeks apart)

Calendar - tetravalent conjugation

[A, S, W135, Y-D] and [A, S, W135, Y-CRM] vaccines: one dose for all 2-year-olds and adults

A, S, W135, Y-D vaccines only: 2 doses for children 9-23 months (at least 12 weeks apart)

Buster dose

If transferred to a baby aged 2-11 months, after a year MenC

Circumstances that cannot be used

Anaphylaxis or hypersensitivity (allergy) detected after receiving a previous dose

Side effects

Severity: anaphylaxis (rare)

Mild: reaction at the injection site, increased body temperature

Special precautions

See the vaccination calendar for age restrictions

Dose

0.5 ml

Injection site

In infants, the perednelateral (outer) surface of the thigh,

The deltoid muscle of the shoulder in older children and adults

Type of injection

Between the muscles

Save

From +2°C to +8°C

Avoid freezing MenC vaccine
the most important thing is to start treatment on time. In meningococcal infection, the disease progresses very quickly, sometimes only a day can pass between the first symptoms and death. Therefore, if in doubt, see a doctor immediately.

REFERENCES

1. Королева И. С. и др. Менингококковая инфекция в Российской Федерации //Медицинский алфавит. – 2015. – Т. 1. – №. 6. – С. 27-28.
2. Королева И. С., Белошицкий Г. В. Менингококковая инфекция и гнойные бактериальные менингиты //М.: МИА. – 2007.
3. Ярмухамедова Н. А. и др. Клиническо-эпидемиологические аспекты нейробруцеллеза по данным областной инфекционной клинической больницы города Самарканда //Вестник науки и образования. – 2020. – №. 18-2 (96). – С. 72-77.