New Day in Medicine
Новый День в Медицине
NDM

TIBBIYOTDA YANGI KUN

Ilmiy referativ, marifiy-ma'naviy jurnal

AVICENNA-MED.UZ

ISSN 2181-712X.
EiSSN 2181-2187

7 (69) 2024

ТИББИЁТДА ЯНГИ КУН
НОВЫЙ ДЕНЬ В МЕДИЦИНЕ
NEW DAY IN MEDICINE

Илмий-рефератив, маънавий-маърифий журнал
Научно-реферативный,
духовно-просветительский журнал

УЧРЕДИТЕЛИ:

БУХАРСКИЙ ГОСУДАРСТВЕННЫЙ МЕДИЦИНСКИЙ ИНСТИТУТ
ООО «ТИББИЁТДА ЯНГИ КУН»

Национальный медицинский исследовательский центр хирургии имени А.В. Вишневского является генеральным научно-практическим консультантом редакции

Журнал был включен в список журнальных изданий, рецензируемых Высшей Аттестационной Комиссией Республики Узбекистан (Протокол № 201/03 от 30.12.2013 г.)

7 (69)

2024

ИЮЛЬ

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Received: 20.06.2024, Accepted: 02.07.2024, Published: 10.07.2024

UDC 616.9:579.887

OCCURRENCE AND MODERN DIAGNOSIS OF MYCOPLASMA AND CANDIDA PNEUMONIA IN CHILDREN

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✓ ***Resume***

Mycoplasma pneumonia is a bacteria that can cause disease by damaging the mucous membrane of the respiratory system (throat, lungs, trachea). People, especially children, can have bacteria in their nose or throat at one time or another without getting sick.

Keywords: pneumonia, mycoplasma, candidiasis, sore throat, infection, bacterium

ВСТРЕЧАЕМОСТЬ И СОВРЕМЕННАЯ ДИАГНОСТИКА МИКОПЛАЗМЕННОЙ И КАНДИДОЗНОЙ ПНЕВМОНИИ У ДЕТЕЙ

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✓ ***Резюме***

Микоплазменная пневмония - это бактерии, которые могут вызвать заболевание, повреждая слизистую оболочку дыхательной системы (горло, легкие, трахею). Люди, особенно дети, могут иметь бактерии в носу или горле в тот или иной момент, не болея.

Ключевые слова: пневмония, микоплазма, кандидоз, ангина, инфекция, бактерия.

MIKOPLAZMALI VA KANDIDALI PNEVMONIYANING DIAGNOSTIKASI VA ZAMONAVIY DAVOLASH USULLARI

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✓ ***Rezyume***

Mikoplazmali pnevmoniya - bu nafas olish tizimining shilliq qavatiga (tomoq, o'pka, traxeya) zarar yetkazish orqali kasallikka olib kelishi mumkin bo'lgan bakteriya hisoblanadi. Aholi o’rtasida, ayniqsa bolalarda bir vaqtning o'zida kasal bo'lmasdan burun yoki tomoqda bu bakteriyalar bilan zararlanishi mumkin.

Kalit so'zlar: pnevmoniya, mikoplazma, kandidoz, tonzillit, infeksiya, bakteriyalar.

Introduction

Pneumonia is the leading cause of death in children worldwide, killing 1.8 million children under five years of age each year, 98% of whom live in 68 developing countries [1]. The incidence of community-acquired pneumonia (CAP) in Russia is 14–15%, which corresponds to approximately 500,000 patients per year. [2]. Among the etiological agents of CAP, M. pneumoniae accounts for up to 40% of cases in children and about 18% of respiratory infections in patients requiring hospitalization [4, 5]. Young children are less susceptible to M. pneumoniae compared to school-aged children [6]. However, in recent years, studies have emerged from Europe and Australia [7] that preschool children and even infants may be susceptible to this infection and have clinical symptoms

characteristic of the disease caused by M. pneumoniae. In this regard, it is relevant to study age-related clinical features of mycoplasma pneumonia (MP) in young and older children [8].

Mycoplasma pneumonia is a bacteria that can cause disease by damaging the mucous membrane of the respiratory system (throat, lungs, trachea). People, especially children, can have bacteria in their nose or throat at one time or another without getting sick [9].

Mycoplasma pneumonia bacteria usually cause mild infections of the respiratory system (parts of the body involved in breathing). Sometimes these bacteria can cause more serious lung infections that require hospital treatment [5]. Good hygiene is important to reduce the spread of mycoplasma pneumonia and other respiratory microbes.

When a person infected with mycoplasma pneumonia coughs or sneezes, small droplets containing bacteria form in their respiratory tract. Other people can become infected if they inhale these droplets. Most people who spend a short time with someone who has mycoplasma pneumonia do not become infected. However, bacteria often spread between people living together because they spend a lot of time together [4]. But the child's body is very weak and can be affected by bacteria in a short time.

Outbreaks of mycoplasma pneumonia occur primarily in congregate settings such as schools, college dormitories, military schools, long-term care facilities, and hospitals. During school outbreaks, if people in the community become ill, they are usually family members of the sick schoolchildren [1]. Children infected with mycoplasma pneumonia usually have cold-like symptoms.

The most common type of infection is tracheobronchitis (chest cold). Common cold symptoms include a sore throat, feeling tired, a high fever, a slowly worsening cough that may last for weeks or months, and a headache.

Children under 5 years of age who become infected with mycoplasma pneumonia may have different symptoms than older children and adults. Once infected with the bacteria, symptoms usually appear within 1 to 4 weeks.

There are different diseases in the world. As the climate changes, people tend to get sick more easily. Above we talked about mycoplasma pneumonia. But there is another serious disease - candidiasis.

Candidiasis is an infection caused by the yeast candida. Candida is usually harmless and is found on the skin, vagina, and digestive system. But in some cases it may become overgrown. This can cause rash, itching and other symptoms [3].

Yeast usually lives in the body and does not cause harm. It is found on the skin, in the digestive system (including the mouth and throat), and in the genital area. But under certain conditions it can cause an infection. This can happen when the skin is broken, when it is warm and humid, or when the child has a weak immune system. In some very sick children, it can infect deeper tissues or the bloodstream and cause serious illness. Medicines with antibiotics or corticosteroids can also cause yeast overgrowth. This is because these medications kill normal bacteria that normally prevent yeast from growing.

Research results and discussion

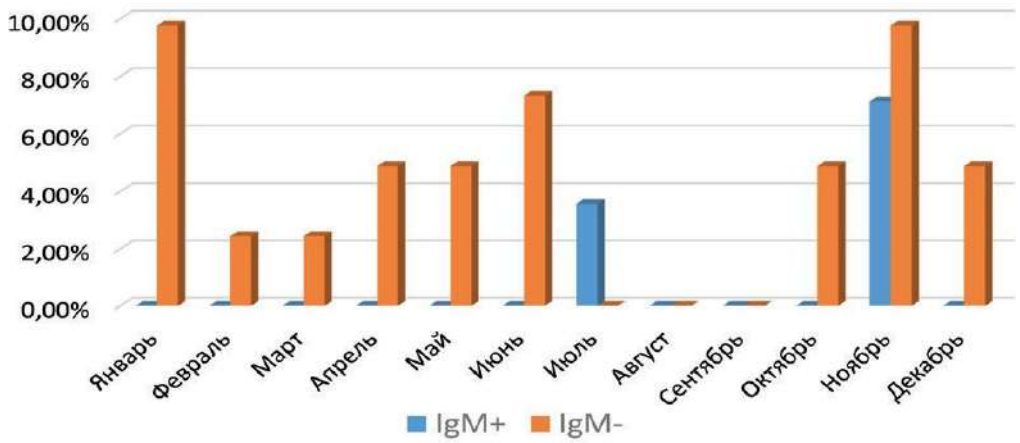
Comparison of demographic and clinical data between children with CAP due to M. pneumoniae and children with pneumonia due to other unspecified pathogens. The average age in the 2 study groups did not differ significantly and was 10.9±4.4 and 6.9±4.6 years, respectively ($p=0.64$).

Based on the results of a serological examination, acute MP was identified in 28 (40.6%) children. Of these, 15 (53.5%) were girls and 13 (46.5%) were boys ($p>0.05$). A significant difference was found in the distribution of children by age, 89.3% of them were over 5 years old, and 10.7% were under 5 years old ($p<0.05$). In the group of children with other etiologies of CAP, the number of children under 5 years of age (51.2%) and over 5 years of age (48.8%) was the same ($p>0.05$), the number of boys and girls also did not differ significantly ($p<0.05$). The results obtained confirm the literature data that mycoplasma etiology of CAP occurs more often in children over 5 years of age [6]. In our study, the average age of these patients was 11.84 ± 0.66 years.

Analysis of the duration of symptoms of the disease before hospitalization showed that children over 5 years of age with MP were hospitalized significantly later compared to children under 5 years of age (7.76±0.68 and 4.0±1.06 days, respectively; $p<0.05$) and in comparison with children with other etiologies of CAP. In this group of patients, the onset of the disease with respiratory symptoms ($p<0.05$) and the presence of a prolonged nonproductive cough ($p<0.05$) were also more often recorded. The duration of fever in the compared groups before hospitalization did not differ significantly.

Pic. 1 shows the distribution of children hospitalized with CAP aged 2 to 5 years with positive and negative markers of acute mycoplasma infection by month of 2022. From the data presented in the figure it follows that only in July and November in children under 5 years of age with CAP were markers of acute

mycoplasma infection identified, and in November their number was 2 times higher than in July (7.0 and 3.5 % respectively, p<0.05). The total number of children under 5 years of age with positive MP markers during the year was only 10.7% of all children with CAP examined serologically. CAP of non-mycoplasma etiology in children under 5 years of age occurred throughout the year, with the exception of August and September with a peak in January and November (the maximum number of sick children).



Pic. 1. Proportion of hospitalized children with CAP under the age of 5 years with positive and negative markers of acute mycoplasma infection by months of 2021.

Diagnosis and treatment

The health care provider will ask about your child's symptoms and health history. He or she will give your child a physical examination. And your healthcare provider may scrape a skin sample for testing in a laboratory.

Most cases of candidiasis are mild and respond well to treatment. Treatment depends on where the infection is and how severe it is. Yeast infections in the vagina or anus can be treated with medicated suppositories. Thrush can be treated with medicated mouthwash or lozenges.

A severe infection or an infection in a child with a weak immune system can be treated with oral antifungal medications.

Prevention includes keeping skin dry, changing diapers frequently, and using antibiotics only when necessary.

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Entered 20.06.2024