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Acute Pneumonia: A New Look at the Old Problem

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In recent decades, treatment of acute pneumonia focused solely on antibiotic therapy does not include pathogenetic, specific assistance methods and repeats the treatment principles of other inflammatory diseases.

According to current therapeutic and preventive protocols, a particular type of inflammation can be believed to be Acute Pneumonia.

There is a strong contrast between existing approaches to the treatment of AP and the following well-known facts.

1. AP is not a specific infectious disease.

2. Approval, there is no absolute evidence of the priority position of specific pathogens in the etiology of AP, for the vast majority of these patients were cured and cured without clarifying the etiology of the disease. Cause a significant increase in septic complications AP, unlike expectations, remains without a reasoned explanation on the background of total pneumococcal vaccination.

3. Some non-specific bacteria reflect the etiology of AP. Such microorganisms are usually found in the symbionts of healthy people.

Reducing the efficacy of antimicrobial drugs, the emergence and rising numbers of antibiotic-resistant pathogens and a steady increase in the incidence of purulent complications add significance and urgency to solving this issue.

A revision of ideas about the existence and processes of AP is the first step in this decision. This work was carried out and tested in a clinical setting at Novokuznetsk State Institute for Postgraduate Doctors (USSR, Russia) in the years 1976-1984.

The new theory AP was based on the following scientific medical axioms, with earlier empirical rationale.

1. The body's response to any stimuli, including the initiation of inflammation, is unique and highly individual.

2. A vascular reaction with a specific stage series is the basis for the inflammatory transformation of the body tissue.

3. Small and large blood circulation circles have not only a strong anatomical relation but also an opposite interdependence of functions.
4. Among the non-specific mechanisms among inflammation, AP is the only phase that occurs in the lower-circulation system.

4. The same medical procedure may have different effects on inflammation in blood circulation in small or large circles.

Additionally, private studies were conducted after:

1. Experimental model of AP (4 experimental series, 44 animals) obtaining a model of pleural complications (invention certificate No 1631574, A1,1 November 1990, USSR).

2. X-ray analysis 56 lung anatomical arrangements, taken from deceased patients, with various types of AP.

3. Record comparative rheopulmonography before and after medical procedures (thirty-six patients).

4. Study of the diagnosis and treatment of 994 children with AP and its numerous complications, both disruptive and pleural.

In the initial phase of extreme forms of AP, the new treatment protocols were applied in 203 cases.

The results obtained allow us to talk about the probability of the assured avoidance of suppurative and harmful disease complications.

Background:

More than a century later pneumonia remains a popular clinical problem. It remains among the top 10 most common mortality causes among all age groups. The clinical challenge of community-acquired pneumonia (CAP) involves the wide range and ever-increasing number of disease-causing microbial agents, the difficulty of making a clinical and etiological diagnosis, and the fact that no single antimicrobial regimen can address all possible causes. Since at the time of initial treatment, a specific etiological diagnosis is often not feasible, the clinician must determine which clinical therapy is better suited.

The growing prevalence of antibiotic resistance among many of the most common pathogens aggravated this challenge. An understanding of the pathogenesis of the disease, evaluation of relevant data from a careful history and physical examination, recognition of common clinical patterns of infection, and information from the microbiology laboratory all help in narrowing down possible pneumonia etiologic agents, thus allowing for empirical selection of reasonable therapy.

Acute pneumonia is characterized as alveolus inflammation, and infectious agent interstitial tissues of the lungs resulting in acute signs and respiratory symptoms.

More than 155 million cases of pneumonia and 1.8 million deaths occur worldwide each year, particularly affecting children < 5 years of age in resource-poor countries.

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For children < 2 years of age and 35 to 52 per 1000 cases in children 3 to 6 years of age, emergency visits for CAP are estimated to be 74 to 92 per 1000 cases in the U.S. level. The hospitalization rate is about 200 per 100,000 cases, with the highest in children (> 900 cases per 100,000 cases).

Pneumonia is particularly likely in children with fever, cough, tachypnea, and shortness of breath in which chest X-ray demonstrates penetrated pulmonaries.

Alternative diagnoses are considered especially in the absence of fever or relapsing symptoms and signs, including aspiration to the foreign body, asthma, gastroesophageal reflux, cystic fibrosis, congestive heart failure, systemic vasculitis, and obliteran bronchiolitis.

As seen in bacterial pneumonia, children who experience chemical pneumonia after ingestion of volatile hydrocarbons may have serious necrotizing pneumonia with high fever and leukocytosis.

In otherwise healthy babies, necrotizing pneumonia resolves in antibiotic treatment alone provided 80 to 90 per cent of cases obstruction of airways is removed. Fever usually persists for 4 to 8 times. Intracavitary hemorrhage with hemoptysis or spillage of abscess material with infection spread to other areas of the lung is the most common complication of lung abscess.

Most cases of pneumonia or lung abscess without necrotisation substantial PPE can be treated with antibiotics effectively without requiring surgical surgery.

Parenteral therapy is usually started. Clindamycin was found to be superior to penicillin for the treatment of anaerobic lung abscess in adult studies; however, a clinical study involving children did not find any difference between these two drugs.155–157 Parenteral clindamycin is an effective therapeutic therapy for children with suspected.

Combination therapy with ticarcillin or piperacillin and a β-lactamase inhibitor, with or without an aminoglycoside, is considered when necrotizing pneumonia occurs in a hospitalized child or in a child for whom an Enterobacteriaceae (e.g., Escherichia coli, Klebsiella, etc.) or Pseudomonas aeruginosa infection is suspected.

Various pathogens, especially viruses and bacteria make infants and children suffer from lower respiratory tract infection (LRTI). The development of a microbial diagnosis of pneumonia in infants and children was problematic because of difficulties in distinguishing infection from contamination of the upper airways and lack of effective laboratory diagnostic tests.

Specific etiology in study of pneumonia in children with immune competence only 43% to 66% of agents were confirmed. Detection of more than one pathogen complicates the detection of primary pathogenicity.