

Respiratory Syncytial Virus

Human respiratory syncytial virus (RSV) is an antigen-stable virus that causes serious respiratory diseases in humans. It belongs to the RNA-enveloped viruses in the family *Paramyxoviridae*, subfamily *Pneumovirinae*, genus *Pneumovirus*. The infection occurs worldwide and mainly affects infants and young children. When the virus replicates, multinucleated syncytia are formed.

Pathogenesis

It is a common cause of severe respiratory infections in pediatrics, especially in preschool children. It causes bronchitis, bronchiolitis and pneumonia. The infection is spread by droplets. They multiply primarily in the cells of the airway mucosa. From there, especially during primary infection, it spreads further into the paranasal sinuses, the Eustachian tube, the middle ear and the lower respiratory tract. The mucosa responds to virus replication by edema, hypersecretion, and epithelial necrosis, which can secrete into the lumen. These factors can lead to bronchial and bronchiole obstruction and pulmonary atelectasis. Specific secretory IgA provides immunological protection against infection, maternal serum antibodies are not protective. When IgA decreases, re-infection often occurs, which occurs in older children and adults inapparently or as a mild inflammation of the upper respiratory tract.

Clinical

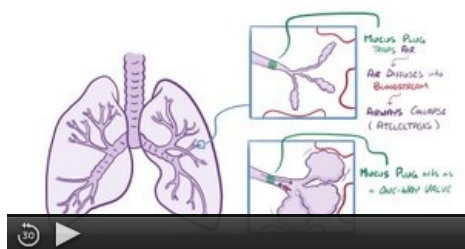
The incubation period is 2-8 days. Thereafter, RSV infection may manifest as nasopharyngitis, bronchitis, bronchiolitis or pneumonia. The disease is often complicated by otitis media. In older children and adults, the disease is mild or the infection is completely inapparent. We must expect a serious course in the elderly and patients with immunodeficiency.

Therapy and prevention

Mild respiratory infections are treated symptomatically, with aerosol aerosolization in severe conditions. The use of a live vaccine has not been successful. A live attenuated or recombinant vaccine is not yet available for wider use.

Immunoprophylaxis with palivizumab (a specific anti-RSV monoclonal antibody) is used in immature infants, low birth weight infants and bronchopulmonary dysplasia.

Video



Links

References

1. BENEŠ, Jiří, et al. *Infectious medicine*. 1st edition. Galén, 2009. 651 pp. 111-112. ISBN 978-80-7262-644-1.
2. ↑ KOPŘIVA, František and Vladimír MIHÁL. Respiratory syncytial virus - prevention and treatment options. *Clinical Pharmacology and Pharmacy* [online]. 2012, vol. 26, vol. 4, p. 179, also available from < <http://www.klinickafarmakologie.cz/pdfs/far/2012/04/05.pdf> >. ISSN 1803-5353.

References

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- BEDNÁŘ, Marek, et al. *Medical microbiology: bacteriology, virology, parasitology*. 1st edition. Prague: Marvil, 1996. 558 pp. 431-432. ISBN 8023802976.