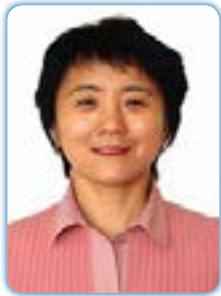


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Inhaled IFN- α 1b for RSV bronchiolitis

Respiratory syncytial virus (RSV) is the most common pathogen of bronchiolitis and 90% children are infected with RSV in their first 2 years. Interferon- α 1b is the main subtype of alpha interferon in Chinese and has been widely used in viral disease treatment. A series of preclinical and clinical studies were carried out to evaluate efficacy and safety of IFN- α 1b against RSV by aerosol inhalation. Animal PK and tissue distribution study demonstrates that after administration via aerosol inhalation, large amount of 125 I-IFN- α 1b concentrates in airway and stays longer than intramuscular injection. In a PD study, RSV infected mice which receiving inhaled IFN- α 1b treatment show less tissue damage and lower RSV load in lung and increased CD3+CD8+ lymphocyte level in peripheral blood compared with control group. Both anti-RSV and immunoregulation effects of IFN- α 1b are in a dose-effect manner. In a multicenter RCT study recruiting 330 acute bronchiolitis children, the total improvement rates of nebulized IFN- α 1b 2 μ g/kg and 4 μ g/kg were 92.3% and 95.0% respectively and significantly higher than control group (85.3%, $P < 0.05$). The effect on symptoms improvement of higher dose group is better than lower dose. The efficacy of IFN- α 1b is better when used in early stage of disease and for RSV positive children. Irritation symptoms and serious adverse reactions were not observed. In summary, inhaled IFN- α 1b is effective and safe for anti-RSV bronchiolitis in children.

Biography

Shen Kunling is the Professor, Doctoral Supervisor and Physician Director. She has studied as a Visiting Scholar in Switzerland Infectious Disease Control Center, Australia Sydney Alexander Children's Hospital and Medical College of Wisconsin. She has been serving as the current Chinese Medical Association Pediatrics Chairman, Committee Member of the International Academy of Pediatrics, Committee Member of the Asian Academy of Pediatrics, Vice President of Pediatricians Branch of the Chinese Medical Association, Leader of Chinese Medical Association breathing professional team, Committee Member of the tenth Pharmacopoeia and Committee Member of Chinese Medical Association breathing surgeon branch.

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