

International Conference on Pediatrics & Gynecology

Aerosol delivery to ventilated infants

Jan Mazela

Poznan University of Medical Sciences in Poznan, Poland

There are several aerosolized drugs which have been used in the treatment of neonatal respiratory illnesses, such as: bronchodilators, diuretics and surfactants. Preclinical *in vitro* and *in vivo* studies identified a number of variables that affect aerosol efficiency including particle size, aerosol flows, nebulizer choice and placement. Nevertheless, an optimized aerosol drug delivery system for mechanically ventilated infants still does not exist. The results of the research focused on the inhalational therapies among infants requiring invasive and non-invasive ventilator support brought conflicting conclusions. There were different nominal doses used, which did not lead to consistent clinical and biological effects. Aerosol particle size as well as emitted dose at the patient interface was not analyzed in most of the randomized clinical studies, which does not allow for objective assessment of the effectiveness of inhalational therapies for different indications. Increasing interest in the aerosol therapy requires more controlled and focused research of drug / device combinations appropriate for the neonatal population in the future.

Biography

Dr. Jan Mazela graduated Medical University in Poznan, Poland in 1994. Following his residency in pediatrics, he completed fellowship in neonatology at the University of Illinois in Chicago. He served as a consultant to the European office of the World Health Organization, where he served as a clinical expert for two years. He defended his PhD thesis in epidemiology in 2006. He has been appointed clinical consultant to Abbott Laboratories, Medimmune and Discovery Laboratories. At present he is Assistant Professor at the Department of Neonatology at Poznan University Hospital. His major research is focused now on aerosol therapy.