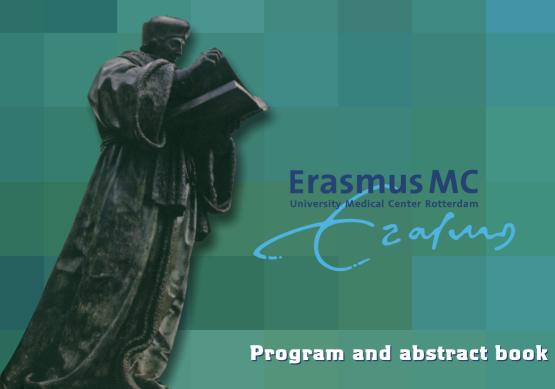
# Acute Respiratory Failure

### Second International Master Class

on the occasion of the retirement of Prof. Dr. Burkhard Lachmann

Wednesday 3, Thursday 4 and Friday 5 October 2007 Congress Center De Doelen, Rotterdam
The Netherlands



## COMBINED APPLICATION OF LUNG RECRUITMENT MANEUVER (LRM) AND SURFACTANT ADMINISTRATION FOR THE TREATMENT OF ARDS

Alexeij Vlasenko<sup>1</sup>, Andrey Bautin<sup>2</sup>, Andrey Seyliev<sup>3</sup>, Vladimir Volchkov<sup>3</sup> and **Oleg Rosenberg**<sup>3</sup>

- <sup>1</sup> RIGR & S.R Botkin's hospital, Moscow, <sup>2</sup> Cardiovascular-surgery Clinic of the Military MA, Saint Petersburg,
- <sup>3</sup> Department of Medical Biotechnology of the CRIRR, Saint Petersburg, Russia

e-mail: rozenberg@mail.rcom.ru

### 91

#### Aim:

To improve efficiency of ARDS treatment via combined application of LRM and Surfactant-BL (ST-BL, Biosurf, Russia).

#### Methods:

26 pts developed ARDS (AECC criteria, 1994) and were on mechanical ventilation. Group I (14 pts) received LRM 4-6 times a day plus endobronchial segmental ST-BL administration at a dose of 6 mg/kg body weight every 12 hours. Group II (12 pts) received only LRM. LRM was performed by increasing Vt to 12-15-17 ml/kg body weight, increasing PEEP by 15-20-25 cm  $\rm H_2O$  and Ppeak by 50-60-70 cm  $\rm H_2O$  within 30-60 sec. In surfactant group LRM was performed immediately after surfactant administration.

#### Results:

After 24 h., 48 h. and 72 h. Pa0<sub>2</sub>/Fi0<sub>2</sub> ratio grew from 127 $\pm$ 21.6 to 218 $\pm$ 19.1; 274.3 $\pm$ 12.1 and 293.5 $\pm$ 12.1. The same data for group II Pa0<sub>2</sub>/Fi0<sub>2</sub> was from 152.4 $\pm$ 12.2 to 164.1 $\pm$ 12.4; 186.8 $\pm$ 13.2 and 234 $\pm$ 14.6. Respiratory support lasted 14.2 $\pm$ 1.1 days for group I and 16.1 $\pm$ 1.5 for group II. Mortality was 3 of 14 pts for group I and 5 of 12 pts for group II.

#### Conclusion:

Combined application of LRM and ST-BL administration proved to be beneficial in that LRM insures surfactant penetration to injured areas while surfactant prevents derecruitment.