Presence of mimivirus in bronchoalveolar lavage fluid of critically ill patients suspected of ventilator-associated pneumonia

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Introduction:

Mimivirus:

- Amoebea-associated micro-organism (AAMO)
- Giant virus
- Antibodies present in patients with pneumonia
- Suggested as potential respiratory pathogen
- Positive serology → increased duration of mechanical ventilation and ICU stay in patients with VAP

Aim:

Evaluate the occurrence of mimivirus in BALF samples of critically ill patients suspected of VAP by means of real-time polymerase chain reaction (RT-PCR)

Material and Methods

- ICU of Maastricht University Medical centre
- 750-bed hospital
- Study period: January 2005- October 2009
- Collection of all BALF samples from patients suspected of VAP
- Data collection: BALF total cell count, differential cell count, quantitative bacterial culture and detection of viruses, mycobacteria and fungi
- BALF samples retrieved from -80°C
- RT-PCR targeting mimivirus

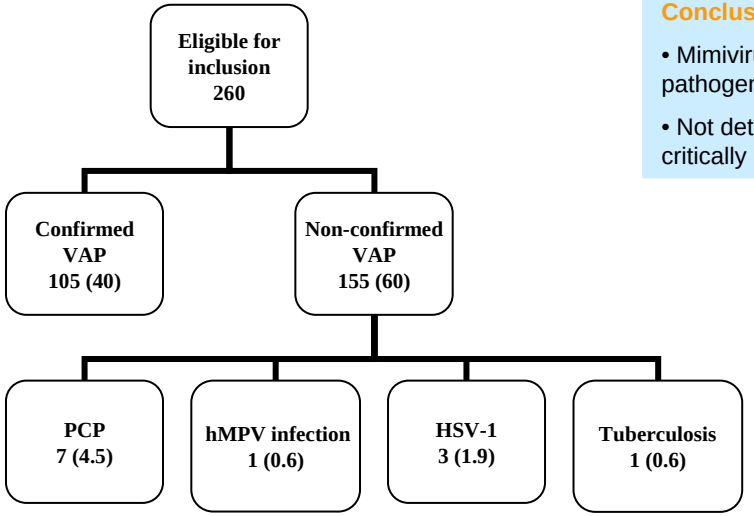

Figure 1: Included BALF samples. Percentages between brackets

Results

- 260 BALF samples included
- 214 patients
- mean age 63 years (range 19-84)
- 105/260 (40%) microbiologically confirmed VAP (86 patients)
- Presence of mimivirus DNA could not demonstrated in bacterial VAP positive nor the bacterial VAP negative BALF samples

Conclusion:

- Mimivirus suggested as potential respiratory pathogen
- Not detected in our study-population of critically ill patients suspected of VAP

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