



Bilaga 1

1 (3)

Effekt av icke-invasiv ventilering vid akut andningsinsufficiens orsakad av coronavirus (2020), Upplysningstjänstsvår ut202021

Bilaga 1 Tabell över ingående studier

Study Year Country Study design Setting	Population	Intervention and control treatments	Outcome	Results	Aims Conclusions	Risk of bias Limitations
Alraddadi et al 2019 Saudi Arabia Design: Retrospective observational study <u>with</u> control intervention Setting: Tertiary care hospitals	Patients diagnosed with MERS who required ventilator support Intervention: n=105, Mean age=60 y, Gender distribution=65.7% male Control: n=197, Mean age=58y, Gender distribution=71.1% male	I: NIV was used as the initial ventilatory mode in 105/302 (34.8%) patients C: Invasive MV as the initial ventilatory mode in 197/302 (65%) patients	The primary outcome was 90-day mortality ICU and hospital length of stay were collected Duration of non-invasive and invasive mechanical ventilation and ventilator free days Use of oxygen rescue therapies	Mortality: OR 0.61, 95% CI, 0.23 to 1.60, p=0.27) Oxygen rescue therapies: NIV: 20%, MV 11.7%, p=0.05 Time on ICU: NIV: 11 days, MV, 11 days, p=0,79 Length of hospital stay: NIV: 22 days, MV: 20 days, p=0.6 There were no differences in mortality with NIV compared to MV in subgroups of patients with PaO2/FiO2 ratio ≤100 and >100 Only 8/105 (7.6%) of the NIV patients avoided subsequent intubation. These patients were significantly younger than those who failed NIV and had much lower baseline SOFA score 90-day mortality was significantly higher in patients who failed NIV compared with patients successfully treated only with NIV	Aim: To assess the success of NIV in MERS patients with AHRF in avoiding intubation and its association with mortality and ICU and hospital length of stay Conclusion: We have shown that among patients with MERS-related AHRF, NIV was commonly used, but nearly always resulted in subsequent transition to invasive ventilation. Our results suggest that while the initial NIV use in MERS patients was not associated with reduction of mortality or length of ICU or hospital stay, these patients had greater requirement for subsequent inhaled nitric oxide. A minority of patients were successfully managed with NIV—those who were young and had less severe disease	Medium risk of bias Limitations in the selection process. Lack of protocol. Retrospective design
Yam et al 2005 Hong Kong	Patients between 15–74 years old who developed acute	Clustered analysis between hospitals with NIV	Primary outcome measures were need for	Compared to IMV Hospitals, NIV Hospital had lower adjusted	Aim: Compare the outcomes of ARF patients with SARS supported initially with NIV against those	Medium risk of bias

<p>Design: Retrospective register study with control group.</p>	<p>respiratory failure during hospitalization for SARS</p> <p>Intervention: n=42, Mean age=47 y, Gender distribution=45.2% male</p> <p>Control: n=451, Mean age=44 y, Gender distribution=49.7% male</p>	<p>as initial treatment in standard treatment protocol and those who didn't</p> <p>I: 42 patients whereof 21 received NIV</p> <p>C: 451 patients were 188 received IMV</p>	<p>intubation and mortality.</p> <p>Secondary outcomes for each group included the time from specific events (ARF, pulsed steroid rescue, peak FiO₂) to clinical Improvement.</p>	<p>odds ratios for intubation 0.36, 95% CI, 0.164 to 0.791, p=0.011 and death 0.235, 95% CI, 0.077 to 0.716, p=0.011) and improved earlier after pulsed steroid rescue</p> <p>There were no instances of transmission of severe acute respiratory syndrome among health care workers due to the use of non-invasive ventilation</p>	<p>treated solely with invasive mechanical ventilation</p> <p>Conclusion: compared to invasive mechanical ventilation, early application of non-invasive ventilation as initial support for SARS-related acute respiratory failure appeared to be associated with significantly reduced need for intubation and mortality. under currently recommended infection control conditions, noninvasive ventilation did not result in any SARS coronavirus transmission among health care workers in our study</p>	<p>Unequal distribution of excluded participants between groups</p> <p>Limitations in the selection process. Lack of protocol. Retrospective design.</p>
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AHRF = Acute hypercapnic respiratory failure; **ARF** = Acute renal failure; **C** = control; **CI** = Confidence interval; **FiO₂** = Fraction of inspired oxygen; **ICU** = Intensive care unit; **I** = Intervention; **MERS** = Middle East Respiratory Syndrome; **MV** = Mechanical ventilation; **NIV** = Non-invasive ventilation; **PaO₂** = Partial pressure of oxygen in arterial blood; **SARS** = Severe acute respiratory syndrome; **SOFA** = The sequential organ failure assessment; **y** = Years

Bilaga 2 Exkluderade studier

Referens	Exklusionsorsak
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