

Category : **Respiratory: ARDS**

**A241 - “Non-invasive ventilation in Covid-19 patients, the experience of a level 2 unit”**

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### **Introduction:**

Covid-19 has a broad spectrum of severity and, although the majority of those infected are asymptomatic or have mild disease, many need hospitalization and organ support for respiratory failure. The approach to this dysfunction varied across the pandemic, influenced by retrospective data and centre experience. After initial unfavorable data, NIV resumed prominence during the 2nd wave, having been the modality of choice in our intermediate care unit (IU). We describe our NIV cohort and the results of our ventilatory strategy.

### **Methods:**

Descriptive retrospective study. Data were collected from electronic medical records of 202 Covid-19 patients (PTS) under NIV at the IU between September/20 and March/21. Categorical data are presented as frequency (percentage) and were compared using  $\chi^2$ -test. Continuous variables were compared using Mann-Whitney U test. Statistical significance was set at  $p < 0.05$ .

### **Results:**

202 of 469 PTS were submitted to NIV. Mean age was 66 years and 62.8% were male. Most common comorbidities were hypertension, dyslipidemia, obesity and diabetes. Mean admission SOFA score was 3,6. Most PTS underwent corticosteroid therapy, 86.7% in  $>1$ mg/kg dosage equivalent. Remdesivir was used in 50%. In 88.6% NIV was the initial modality of ventilatory support, 11,4% after HFNC failure (23). The preferred mode was CPAP with mean maximum pressure of 13 (6 – 16), titrated to normalization of the work of breathing (WOB). Mean PaO<sub>2</sub>/fiO<sub>2</sub> ratio at start of NIV was 122,  $<100$  in 43% of PTS. NIV failure occurred in 35.6%, intra-unit mortality was 25.6%. 35 PTS were submitted to invasive mechanical ventilation (IMV), 41% died. Advanced age, intolerance to awake prone and delirium were associated with higher mortality.

### **Conclusion:**

NIV is a valid option for the management of respiratory failure secondary to Covid-19 ARDS, reducing the need for IMV. Elevated CPAP values, titrated to WOB control, complemented with prolonged periods of awake prone are essential for success.