A633 - Can non-invasive ventilation change the result of malaria with pulmonary dysfunction?

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Introduction:
Malaria is a common problem in underdeveloped countries, with an estimated mortality of more than one million people per year. Pulmonary involvement is one of the most serious manifestations of Plasmodium falciparum malaria. Non-invasive ventilation (NIV) decreases muscular works and improves gas exchange by recruitment of hypoventilated alveolus. In this context, we analyze the impact of the use of non-invasive ventilation in malaria with pulmonary dysfunction.

Methods:
It’s a retrospective cohort study. We analyzed electronic records of patients who were diagnosed with malaria, with acute respiratory failure, who underwent respiratory therapy with NIV between 2015-2016 within the intensive care unit (ICU). The study variables were: ICU mortality, length of hospital stay, NIV time and outcome groups. Statistical analysis was performed with the Pearson correlation coefficient, with significance level of p <0.01. The statistics were performed using the BioEstat 3.0 program.

Results:
Thirty-one patients were included in the study. Four results were analyzed according to table 1 and image 1. 94% of the patients were discharged from the hospital. Pearson’s correlation coefficient analysis showed statistical significance in the Group (NIV / Discharge) in the analysis of patients hospitalized versus NIV (95% CI = 0.24 to 0.83 <(p) = 0.0036).

Conclusion:
The use of NIV was positive in patients using this resource as first-line treatment of malaria in the fight against respiratory decompensation, with improvement of symptoms.

Table 1:

<table>
<thead>
<tr>
<th>Outcomes</th>
<th>Number of patients*</th>
<th>Days of hospitalization*</th>
<th>Days of NIV*</th>
<th>Time of NIV (minutes)*</th>
</tr>
</thead>
<tbody>
<tr>
<td>NIV / Intubation / Death</td>
<td>2</td>
<td>11</td>
<td>1</td>
<td>75</td>
</tr>
<tr>
<td>NIV / Discharge</td>
<td>20</td>
<td>9,8</td>
<td>3,9</td>
<td>57,3</td>
</tr>
<tr>
<td>Intubation / NIV / Discharge</td>
<td>1</td>
<td>23</td>
<td>7</td>
<td>60</td>
</tr>
<tr>
<td>NIV / Intubation / NIV / Discharge</td>
<td>8</td>
<td>16,1</td>
<td>5,1</td>
<td>75</td>
</tr>
</tbody>
</table>

*average

Serial analysis of intervention groups.

Image 1:
Outcome groups.