**Respiratory: mechanical ventilation**

Assessment of the relation $p_{swing}$/tidal volume during spontaneous ventilation test, as a predictor of successful weaning

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**Introduction:**

By measuring the Pes and its derivatives, we can measure the relationship that exist between the diaphragmatic excursion and the oscillation of the esophageal pressure curve: $p_{swing}$ (PS) so we infer that, just as with the Pes, the variations of it might be related to a weaning failure. However, no nominal value exists in the bibliography to predict the test result.

**Methods:**

Patients who meet with the inclusion criteria start the weaning process through a test of 30 minutes of spontaneous ventilation, T-Tube (TT). And also the respiratory rate (RR) and the tidal volume (TV). From this analysis, an average PS (APS) is determined for each moment of the test (APS1, initial and APS2, final.). A quotient was obtained in relation to these variables using the value previously obtained (quotient $DVT/DPS \times 100$).

**Results:**

A total of 13 patients were included (n=13). Regarding the evolution during TT, 9 (n=9) (69%) were successful, while 4 (n=4) (30.76%) failed. When analyzing a rate that relates the variables TV and PS, a quotient was obtained in relation to these variables using the value previously obtained (quotient $DVT/DPS$) for patients who were successful and who failed, ($DVT/DPS$)/100. Successful patients presented a value of 18.75 while those of the failure group presented a value of 45.83, (OR 1.2 – 3 p=0.082)

**Conclusion:**

When presenting the relationship between TV and PS through the quotient ($DVT/DPS$)/100, it is observed a tendency to have a higher quotient among patients who failed versus those who did not fail.

**References:**

The Application of Esophageal Pressure Measurement in Patients with Respiratory Failure Evangelia Akoumianaki1, American Journal of Respiratory and Critical Care Medicine Volume 189 Number 5.


**Table:**

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<thead>
<tr>
<th></th>
<th>DVT</th>
<th>DPS</th>
<th>$DVT/DPS \times 100$</th>
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<tbody>
<tr>
<td>SUCCESS</td>
<td>4.56</td>
<td>0.24</td>
<td>18.75</td>
</tr>
<tr>
<td>FAILURE</td>
<td>112.3</td>
<td>2.45</td>
<td>45.8</td>
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<tr>
<td>P value</td>
<td>0.036</td>
<td>0.063</td>
<td>0.082 / Or = 1.2</td>
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*quotient $DVT/DPS$ for patients who were successful and who failed, ($DVT/DPS$)/100*