The Effect of Prehospital Continuous Positive Airway Pressure on Intubations

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Background

• Substantial use of CPAP for CHF in-hospital

• Growing use of CPAP in pre-hospital arena for CHF

• Kallio, et. al. 2003¹
  – N = 121
  – Improvement in O₂, RR, HR and SBP

• Hubble, et. al. 2006²
  – N = 215
  – Decreased mortality and intubations

• Thompson, et. al. 2008³
  – N = 71
  – Decreased mortality and intubations

Overview of Charts Reviewed

Total Records Reviewed
1341

EXCLUDED
317 Total
252 No ALS response
16 Seen by ALS but transferred to BLS
41 BLS impression = CHF, ALS impression differed
4 Patient in active cardiac arrest upon arrival
4 Chart incomplete

INCLUDED

1. Seen and treated by ALS
2. ALS impression = CHF/P. Edema
   OR
   BLS impression = CHF/P. Edema AND ALS treated as such
   1024

Transported to a single hospital
332

Before CPAP
(11/1/2005 - 4/30/2007)
174

After CPAP
(7/1/2007 – 12/31/2008)
158
Results

Intubations by Location

<table>
<thead>
<tr>
<th>Location</th>
<th>Number of Intubations</th>
<th>Before CPAP</th>
<th>After CPAP</th>
<th>OR</th>
<th>p-Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prehospital</td>
<td></td>
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<tr>
<td>In-Hospital</td>
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<tr>
<td>Total</td>
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</tbody>
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OR = 0.72 (0.25-2.1), p = 0.61

OR = 0.53 (0.22-1.30), p = 0.20

OR = 0.58 (0.29-1.20), p = 0.13