URGENT VERSUS NON-URGENT DIAGNOSES OF ABDOMINAL PAIN IN THE EMERGENCY DEPARTMENT

Ryan Brunetti, Caitlin Davis, Lorna Richards MS, Melissa McCarthy Sc.D, Andrew Meltzer MS MD
Department of Emergency Medicine, The George Washington University, Washington, D.C.

Background

• Abdominal Pain is the most common cause of visits to US Emergency Departments (EDs) and the causes range from urgent to non-urgent diagnoses.
• There are no validated clinical decision rules to assist physicians in discriminating urgent from non-urgent causes of abdominal pain or which patient needs a CT scan.
• There is controversy regarding the use of CT Scans for patients with abdominal pain due to the increased cost, radiation exposure and length of stay.

Objective

• The objective of this study is to compare the demographics, pain score and CT Utilization for patients with urgent versus non urgent causes of abdominal pain.

Methods

• At an academic ED, a convenience sample of patients with acute abdominal pain were prospectively enrolled by research assistants (RA’s) during the ED visit.
• Treatment information and outcomes were obtained by the RA’s from the EMR and hospitalization records if applicable.
• Follow up phone calls, 2 weeks post initial ED visit to ascertain symptom resolution and treatment outcomes.
• Risk differences in pain severity, CT scan utilization and demographics were compared to the urgency of diagnosis.
• A paired t-test was used to estimate differences in initial clinical characteristics.

Results

• 725 enrolled patients, 144 (20%) had urgent diagnoses and 561 (80%) had non-urgent diagnoses.
• No significant differences were found in insurance type, income level, mean age or pain score between the two groups.
• No significant differences were found in pain medications given.
• CT scan utilization was higher in patients with urgent diagnoses.

Pain Score (p > 0.05)

<table>
<thead>
<tr>
<th>Pain Score (abstracted from EMR)</th>
<th>Urgent</th>
<th>Non-Urgent</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-3</td>
<td>144</td>
<td>561</td>
</tr>
<tr>
<td>4-6</td>
<td>32</td>
<td>114</td>
</tr>
<tr>
<td>7-9</td>
<td>26</td>
<td>85</td>
</tr>
<tr>
<td>Not provided</td>
<td>28</td>
<td>272</td>
</tr>
<tr>
<td>Average of provided</td>
<td>7.5</td>
<td>7.2</td>
</tr>
</tbody>
</table>


Reference


Conclusions

• There was no difference in the pain score for patients with urgent versus non-urgent diagnosis.
• Higher CT scan utilization in patients with an urgent diagnosis suggests appropriate clinical judgment.
• Future studies will seek to target patients who are most likely to have an urgent diagnosis for testing.

Limitations

• A potential limitation is provider work up bias where an increase in CT scans may lead to more urgent diagnoses.