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Causality and Emergency medicine?

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The main goal of emergency medicine is to recognize and treat medical distress and then to dispatch in appropriate place the patient (intensive care, normal care or back to home). The diagnosis and the therapeutic strategies are well known by emergency physicians. However, the etiological strategy is usually considered by them as a further step, considering this could wait further care management, and preformed only in the appropriate unit (if the patient is hospitalized). A good illustration of this comment is the significant lower proportion of citations for the term “causality” for Emergency medicine compared to some others medical specialties in PUBMED (Table). However, causality should be included in the diagnosis procedure, as well as severity, in case of a known causal condition may improve the diagnosis (by significantly changing the post-test probability) or the treatment. For instance, in the case of a subject suffering from an acute chest pain, the evaluation of a possible acute coronary syndrome should include search for atherosclerosis and its risk factors. The presence or at the opposite the lack of risk factors modify significantly the probability of acute coronary syndrome (even though not sufficient, of course).(1) Early treatment includes atherosclerosis management as well. There are some other examples, for which risk factors are clearly identified and the diagnosis is not simple (deep venous thrombosis risk factors for the diagnosis of pulmonary embolism, specific allergen exposure and asthma…).(2;3)

Etiological research in early phase of care can improve the diagnosis and the treatment, such as severity assessment. Further studies are needed to assess how causality could improve the diagnosis in emergency care.
References


Table. Proportion of citation in PUBMED including causality in the corresponding medical specialty in the last 10 years (using Medical Subject Heading Terms).

<table>
<thead>
<tr>
<th>Specialty</th>
<th>Number of citation in the last ten years</th>
<th>Number of citation in the last ten years, for the specialty AND causality</th>
<th>Proportion</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emergency medicine</td>
<td>29571</td>
<td>9377</td>
<td>31.7%*</td>
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<tr>
<td>Cardiology</td>
<td>71575</td>
<td>28773</td>
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<td>Medical Oncology</td>
<td>42879</td>
<td>17614</td>
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<td>44017</td>
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<tr>
<td>Endocrinology</td>
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<td>50.4%</td>
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<tr>
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<td>24959</td>
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<td>Dermatology</td>
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<tr>
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<td>31226</td>
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</tr>
<tr>
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<td>12733</td>
<td>55.2%</td>
</tr>
<tr>
<td>Hematology</td>
<td>46346</td>
<td>26447</td>
<td>57.1%</td>
</tr>
<tr>
<td>TOTAL (emergency medicine excluded)</td>
<td>493638</td>
<td>244456</td>
<td>49.5%</td>
</tr>
</tbody>
</table>

(Performed the 11th, April 2009),

* p<0.0001, Chi² test between Emergency medicine and other specialties searched.