Pulmonary aspergillosis may be common in AIDS with smear negative tuberculosis

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INTRODUCTION

• Autopsy studies from Italy, India, Japan and Uganda indicate that aspergillosis is present in 3-11% of all AIDS deaths1,2,3,4,5.
• 84% of AIDS-related aspergillosis cases identified at autopsy were missed during life5.
• Untreated invasive aspergillosis is almost invariably fatal.
• It is therefore highly likely that some AIDS-associated deaths are due to unrecognised pulmonary aspergillosis.
• Sub-acute invasive pulmonary aspergillosis is diagnosed when Aspergillus-specific IgG is raised and the following criteria are met6:
  1. Cough or haemoptysis for 4 weeks or more.
  2. Cavities on chest imaging.
  3. Aspergilloma is often absent and is not required for diagnosis6.
• This is very similar to the WHO clinical and radiological definition of “smear-negative tuberculosis”.

REFERENCES


RESULTS

<table>
<thead>
<tr>
<th>Aspergillus-specific IgG result</th>
<th>Healthy controls (n=100)</th>
<th>“Smear-negative TB” Patients (n=39)</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Median level</td>
<td>4 mg/L</td>
<td>7 mg/L</td>
<td>0.000</td>
</tr>
<tr>
<td>Range</td>
<td>0-35 mg/L</td>
<td>2–26 mg/L</td>
<td>-</td>
</tr>
<tr>
<td>Number of positive* tests</td>
<td>2 (2%)</td>
<td>10 (26%)</td>
<td>0.000</td>
</tr>
</tbody>
</table>

*≥ 10mg/L

DISCUSSION

• To our knowledge this is the first attempt to estimate the prevalence of sub-acute invasive pulmonary aspergillosis in a population with AIDS.
• Results from this retrospective opportunistic study cannot definitively state the prevalence of sub-acute invasive aspergillosis in this population.
• While all patients had an abnormal chest X-ray, the absence of CT thorax scans means we cannot be certain whether cavities were present or not.
• Some patients with positive Aspergillus-specific IgG may therefore have had simple colonisation rather than active invasive aspergillosis.
• However, the clinical and radiological presentation of these patients is consistent with sub-acute invasive aspergillosis and the high mortality rate is consistent with undiagnosed sub-acute fungal lung disease.
• These results, in combination with existing autopsy data, suggest that undiagnosed sub-acute invasive aspergillosis may well be present in many Africans with AIDS and sub-acute lung disease, currently labelled as smear-negative tuberculosis.
• Prospective studies including CT thorax in addition to Aspergillus serology are now required to definitively measure the prevalence of this fatal, but treatable condition in this population.