Healthcare acquired influenza in critical ill patients

V. Gutiérrez1,3, J. Cerda1, N. Le Corre1,3, R. Medina1,2 and M. Ferrés1,3.
(1) Escuela de Medicina, Pontificia Universidad Católica de Chile, Santiago, Chile.
(2) Departamento de enfermedades infecciosas e inmunología pediátrica
(3) Hospital Dr. Sótero del Río, Santiago, Chile PIA ACT 1408

Background

• Healthcare-associated infections (HAIs) increases morbidity and mortality.
• In 2014, at Hospital Clínico Red de Salud UC CHRISTUS (RS-UCCH), 15% of viral respiratory infections were acquired during hospitalization.
• Influenza was the main etiologic agent.
• The aim of this study was to obtain clinical characterization of HAIs due to influenza virus in patients hospitalized in critical care units (CCU) and special care units.

Methods

• Descriptive study of CCU and special care patients with hospital acquired influenza during 2014-2017. Influenza HAI was defined as: symptoms onset and/or positive influenza PCR ≥ 48 hours after hospital admission, without previous respiratory symptoms or with negative PCR.

Results

N: 22 patients

Median age: 74 years old (3 pediatric cases)

Median time of acquired influenza: day 13th of hospitalization (range 3 -126 days)

77% influenza A
54% of cases during 2014

Figure N° 1: Distribution of healthcare acquired influenza cases

Table N° 1 Characterization of 22 patients with healthcare acquired influenza

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age (y), median (range)</td>
<td>74 (4 m – 93 y)</td>
</tr>
<tr>
<td>Females sex, n (%)</td>
<td>14 (64)</td>
</tr>
<tr>
<td>CCU, n (%)</td>
<td>13 (59)</td>
</tr>
<tr>
<td>Comorbidity, n (%)</td>
<td>19 (86)</td>
</tr>
<tr>
<td>Immunosuppression, n (%)</td>
<td>4 (18)</td>
</tr>
<tr>
<td>Respiratory coinfection, n (%)</td>
<td>6 (27)</td>
</tr>
<tr>
<td>Decompensation, n (%)</td>
<td>11 (50)</td>
</tr>
<tr>
<td>Vaccination, n (%)</td>
<td>9 (41)</td>
</tr>
<tr>
<td>Lethality, n (%)</td>
<td>4 (18)</td>
</tr>
</tbody>
</table>

• Patients with respiratory coinfection:
  • Used more antibiotics (100% vs 50%) p NS
  • Required more days of oxygen (14 vs 3 days) p NS
  • Needed more days of hospitalization (35 vs 22 days) p NS.

• Among all influenza HAI, 59% (n: 13) occurred in unvaccinated patients, although 46% (n: 6) of them met criteria for vaccination recommendation.

Conclusions

• HAI due to influenza occurred in chronic, older and unvaccinated patients.
• Education about HAIs and continuing high vaccination coverage must be a priority.