GLOBAL INFLUENZA HOSPITAL SURVEILLANCE NETWORK (GIHSN) 2020-21 SEASON PROJECT IN TURKEY: UTILIZATION OF INFLUENZA SURVEILLANCE FOR TACKLING SARS-COV-2


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Background and Aims:
GIHSN project has been utilized to quantify the distribution of respiratory viruses and define the clinical burden of SARS-CoV-2 among hospitalized cases

Methods:
• Prospective epidemiological active surveillance using a standard protocol*
• Patients with an acute process due to a predefined condition and hospitalized in the previous 72 hours approached
• Those who comply with influenza-like illness criteria were swabbed
• Samples tested for 13 different viruses (including influenza A, influenza B, RSV, coronavirus and ORV) for 41 strains on Illumina Respiratory Virus Oligo Panel V2

Results:
• 143 patients swabbed between December 22, 2020- May 29, 2021
• Mean age among ≥5 years old 52.4 (18.7 SD)
• 65% male, 66.4% had at least one chronic condition (cardiovascular disease in 34.3%)
• Influenza vaccination coverage rate 13.3%
• ICU admission more frequent among SARS-CoV-2 + patients compared to negative ones in the adult cohort (25% vs 10.5%, p=0.03)
• Worse outcomes noted for those ≥65 years old compared to younger adults patients
  • Admission to ICU (28.6% vs 13.3%, p=0.03)
  • Death (14% vs 2.4%, p=0.01)
• Alpha (n=24) and beta (n=1) VOCs detected among 55 sequenced specimens

<table>
<thead>
<tr>
<th></th>
<th>#included</th>
<th>#Influenza</th>
<th>#SARS-CoV-2</th>
<th>#ORV</th>
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<td>Patients &lt; 5 yrs</td>
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<tr>
<td>Patients 5+ yrs</td>
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<tr>
<td>Total</td>
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<td>0</td>
<td>70</td>
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</tbody>
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ORV, other respiratory viruses

Conclusions:
• Surveillance systems can easily be adapted to tackle emerging pathogens
• The 2020-21 season was dominated exclusively by SARS-CoV-2
• The project revealed valuable results:
  • The lack of circulation of influenza and ORV in a time when the sentinel and SARI surveillance were totally disrupted in Turkey
  • The clinical and genomic characterization of hospitalized COVID-19 cases

*https://www.gihsn.org/the-network/protocol-and-questionnaires

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