Duration of infectious shedding of SARS-CoV-2 Omicron variant and its relationship with symptoms

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Background

- The omicron variant of SARS-CoV-2 was firstly reported on December 17, 2021.
- The duration of quarantine for mild cases was shortened to 5-7 days in most countries.
- We aimed to describe the duration of viral shedding among non-hospitalized HCWs infected with the omicron variant of SARS-CoV-2.

Methods

Healthcare workers Non-severe COVID-19 Prospective
SARS CoV-2 RT-PCR (+)
Nasopharyngeal RT-PCR and Viral Culture among PCR positive samples were obtained

Table 1. The rate of viral culture positivity is based on the presence of symptoms on each defined day.

<table>
<thead>
<tr>
<th>Days of sample collection from onset of symptoms</th>
<th>Viral culture positivity among cases with the symptom (+) (%)</th>
<th>Viral culture positivity among cases with the symptom (-) (%)</th>
<th>Total (%)</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>40/49 (82)</td>
<td>4/4 (100)</td>
<td>44/53 (83)</td>
<td>0.35</td>
</tr>
<tr>
<td>7</td>
<td>19/38 (50)</td>
<td>7/12 (58)</td>
<td>26/50 (52)</td>
<td>0.61</td>
</tr>
<tr>
<td>10</td>
<td>4/25 (16)</td>
<td>3/27 (11)</td>
<td>7/52 (13.5)</td>
<td>0.61</td>
</tr>
<tr>
<td>14</td>
<td>2/9 (22)</td>
<td>2/41 (5)</td>
<td>4/50 (8)</td>
<td>0.08</td>
</tr>
</tbody>
</table>

Figure 1. Viral culture positivity among SARS CoV-2 RT-PCR positive samples.

Results

- In total 60 patients were included. Fifty-five were Omicron positive (Table 1)
- The mean age was 34 (23-54 years) and 78% were female. Only one patient was not vaccinated.
- The rate of viral shedding among symptom-free cases was 58% on day 7, while it was 11% and 5% on days 10 and 14 (Table 1).

Conclusion

- The viral shedding continues for at least 10 days in cases infected with omicron.
- A symptom-based approach might not be a good approach for the cessation of isolation.
- The HCWs who ended their isolation and turned back to work should be alerted of their contagiousness until 10-14 days.

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