**P135**

**Immunological correlation with clinico-weighs of fungal rhinosinusitis during COVID-19 pandemic**

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**Poster session 1, September 21, 2022, 12:30 PM - 1:30 PM**

<table>
<thead>
<tr>
<th></th>
<th>Patient 1</th>
<th>Patient 2</th>
<th>Patient 3</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Age/sex</strong></td>
<td>66/M</td>
<td>61/M</td>
<td>68/F</td>
</tr>
<tr>
<td><strong>Diabetes</strong></td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td><strong>Temporal association with COVID</strong></td>
<td>2 months</td>
<td>1 month</td>
<td>1 month</td>
</tr>
<tr>
<td><strong>Severity of COVID</strong></td>
<td>Mod/Severe</td>
<td>Severe</td>
<td>Severe</td>
</tr>
<tr>
<td><strong>Organism</strong></td>
<td>Candida tropicalis</td>
<td>Aspergillus flavus</td>
<td>Candida glabrata</td>
</tr>
<tr>
<td><strong>Radiological features</strong></td>
<td>B/L pyelonephritis (RT&gt;L) with Rt Hydrouretonephrosis</td>
<td>RT Pyelonephritis with dilated PCS</td>
<td>B/L enlarged kidneys, multiple hypodense areas, extensive perinephric fat standing, early forming abscess on LK lower pole</td>
</tr>
</tbody>
</table>

Background and Objectives: To determine the relation between disease spectrum, etiology, and immunological markers of fungal rhinosinusitis.

Material and Methods: Diagnostic nasal endoscopy was used for the collection of sinus and nasal tissue samples which were processed as per standard microscopy procedure for microscopy, culture, and histopathological examination (HPE). Enzyme-linked immunosorbent assay was used for total IgE, serum IL-6, IL-10, and TNF-α levels detection.

Results: Out of 148 samples, 70% were diagnosed as PNS. COVID-19 infection 46.9% was the most common coexposed condition. Use of steroid therapy 46.9% was the most common predisposing factor. Nasal obstruction 62.2% was the most common clinical feature but headache (P-value .032) and eye discharge were statistically significant (P-value .003). KOH mount revealed findings in 44.6% patients in this study. Combination of KOH, HPE, and fungal culture revealed findings in 62.2% cases. *Rhizopus arrhizus* 27.6% was the most common isolate. *Aspergillus flavus* and *Rhizopus arrhizus* were statistically significant (P-value .003, .026 respectively). IL-4 19.3% was the most common serological marker exposed in this study. PNS imaging revealed that 100% of the patients had single or multiple sinus involvement and maxillary sinus (P-value .038) was significantly associated. Acute invasive fungal rhinosinusitis 75.5% was the most common type of PNS. Mortality was 17.34% in this study.

Conclusion: PNS is an important emerging public health problem and a cause of morbidity and mortality, particularly in immunocompromised patients. Furthermore, in the current scenario of COVID-19 pandemic, PNS has become more fatal and an entity of immediate grave concern than ever before.

**P137**

**Remote inoculation mycosis: Rip Van Winkle wakes up**

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**Poster session 2, September 22, 2022, 12:30 PM - 1:30 PM**

Objectives: After immunosuppression, a remotely inoculated organism may be activated to produce clinical disease. We describe such a case with infection due to *Mucoraceae* resulted in necrotic ulcer.

Patient and Methods: A 54-year-old male, diabetic, hypertensive, status post-live related donor renal transplantation, done in February 2021. The patient was on standard triple immunosuppressive regimen. He developed a painless nodule on his thumb
over 5 months which did not respond to multiple courses of antibiotics. The swelling was excised and sent for various tests. Review of USG after infectious disease referral, showed a small foreign body, like a wooden splinter in the wall of the lesion (Fig. 1). On inquiry, a 3 mm wooden splinter in the lesion was noted during surgery and there was an injury at the same site, 20 years ago when the patient used to work on a farm. Organisms derived from soil or thorn injury including bacterial and fungal organisms were considered in the differential diagnosis. Bacterial organisms were considered less likely as there was no response to antibiotics.

Results: Histopathology showed brownish septate hyphae with constrictions at the areas of septations (Fig. 2). The excised tissue grew a dematiaceous mold. In Lactophenol Cotton Blue (LPCB) mount branched, septate hyphae with sparse conidia were seen. MALDI-TOF MS was unable to identify the mold. Sequencing identified it as *M. romeroi*. No ECOffs or break points (BP) available for *M. romeroi*. Minimum inhibitory concentration (MIC) of Voriconazole (VCZ) is reportedly low and hence was chosen for treatment with an appropriate dose adjustment of Tacrolimus.

Conclusion: This case underscores that remote inoculation, when the patient was immunocompetent, could have introduced a mold, which remained latent and reactivated after immunosuppression. Sending excised tissue for appropriate tests is rewarding. *Medicopsis romeroi* is a rare mold with only 12 cases reported so far. It is difficult to identify except with sequencing. There is no standard guidance on treatment. Surgical excision along with prolonged treatment with one of the new azoles is beneficial.
Figure 2. Histopathology showed brownish septate hyphae with constrictions at the areas of septation.