decrease the time to diagnosis and treatment of these infections, resulting in a reduction in mortality. The objectives of this study were to determine the incidence of Cryptococcosis, and TB using RMs in PLWPs with advanced HIV disease (AIDS) and calculated 30-day mortality.

Methods: PLWPs 18 years and older, treated at the Institute of Tropical Medicine Hospital in Asuncion, Paraguay, not receiving ART and presenting CD4 count < 200 cells/µL, or clinical symptoms suggestive of WBC ranges 5 or 4 infections were enrolled and followed for 30 days. Detection of Histoplasma Ag (DiaSorin) in urine was performed by enzyme immunoassay (EIA), Cryptococcosis Ag (ELISA) detection in serum and cerebrospinal fluid by lateral flow assay (LFA) and Lipopolysaccharide (LPS) detection in urine by LFA (TB-LAM) limited to those patients with CD4 counts < 100 cells/µL and a culture report (limited to patients with respiratory symptoms).

Results: From August 2022 to 25 March 2022, a total of 335 PLWPs were enrolled. Patient median age was 37 years [interquartile range (IQR): 16 years], median CD4 count at enrollment was 91 cells/µL (IQR 147 cells/µL). A total of 80% (n = 269) of patients were symptomatic for one or more of the three diseases being screened for Ag positivity rate was 20% (40/194) for TB-LAM, 10% (20/194) for histoplasmosis, and 11% (21/194) for cryptococcosis. GuesTest showed a positivity of 14% (171/109), and of these patients with positive GuesTest also presented positive fungemia 4.5% (10/221).

In total, 100/156/13 (65%) of patients tested positive had a positive result and confinements were observed 14/151/3 (4.2%) patients (Table 1). Histoplasmosis plus TB was the most frequent co-infection observed 12/135/5 (3.6%).

Methods: To answer these questions, the study enrolled 154, 11% of which are with an OS (1/101).

Conclusions: Preliminary results show that TB and fungal opportunistic infections, including co-infection were common in people with advanced HIV. Longitudinal follow-up will help to evaluate the feasibility and cost of implementing RMs for the early detection of opportunistic infections in PLWPs with AIDS in Paraguay. Early diagnosis could impact mortality.

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Rare presentations of Cryptocccosis: a case series

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

Objectives: Cryptococcosis spp. is usually opportunistic pathogens affecting immunocompromised individuals causing meningitis primarily. Nos-CNS presentations are a rare entity and we hereby present a series of 3 cases in the past 3 years (2022-2024).

Methods: Case records of the three patients were studied. Detailed history, demographic details, investigations, treatment were recorded.

Results: Patient 1 was a 14-year-old girl who came with complaints of fever, pain, swelling, and restricted movements of the right wrist, elbow, and ankle joints with multiple subcutaneous swellings initially on the thighs followed by elbows, arms, and torso. The swellings became Homogenous, indurated to touch. She had a history of being treated 4 times for tuberculosis lymphadenopathy. KOH-Culex white mount of biopsy and pus aspirates samples showed circular yeast cells which were confirmed by cryptococcal antigen detection. All the samples had grown Cryptococcal neoformans on culture except BHI and CSM. She responded to itraconazole and flucytosine. Renowned as pus swab from the auras after a week of antifungal therapy were negative for C. neoforans. Subcutaneous nodules and joint swellings decreased but she developed reactions to amphotericin B and was changed to caspofungin. She is on regular follow-up with no recurrence.

Patient 2 was a 22-year-old male, a known case of Hodgkin lymphoma stage 4 who underwent Autologous Stem cell transplantation (ASCT) and was immunosuppressed. He presented with fever, chills, and cough which got worsened along with multiple cutaneous, lid and subcutaneous lymphadenopathy. KOH-Culex white mount of biopsy samples demonstrated circular yeast cells which were confirmed by cryptococcal antigen detection test of biopsy and BHI samples. Cryptococcal neoformans grew on cultures from all the samples. He succumbed to AIDS and cardiovascular arrest before any treatment could be initiated.

Patient 3 was a 18-year-old female, known case of SLE with lupus nephritis, presented with immunosuppression, fever, chills, shortness, decreased auditory output, and gradual swelling of the body starting from the face and progressing to the whole body. She further developed symptomatic effusion, multiple erythematous tender papules over the right thigh, and cellulitis of the right lower leg. She was Ernstovized on tocoFen in view of BRCT findings suggestive of fungal pneumonia. As galactomannan test was negative, voriconazole was stopped. Pleural tap that flagged positive on Bacillus and C. neoformans grown on subculture. Her condition worsened with septic shock and succumbed to the disease before any treatment could be initiated.

Conclusions: Subcutaneous, joint, and pulmonary involvement in rare, without a primary focus on the central nervous system. Culture and antigen detection can aid in detection and hence early initiation of therapy.

P260

Sporotrichosis hyperendemic in Southern Brazil: twelve years of challenges

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Objective: To evaluate the presence of sporotrichosis in a tertiary hospital in southern Brazil over a period of around one and a half years, to analyze and discuss the characteristics and challenges of the disease.

Methods: A retrospective study was carried out at the University Hospital of Rio Grande (HU-FURG), which has 216 beds. All cases of sporotrichosis were analyzed, resulting in a prevalence rate of 12.02%. The majority of the cases were associated with occupational exposure (54.2%) and trauma (45.8%). The disease affects mainly older people, with a mean age of 65.5 years. The most frequent disease site is the skin, followed by the lymph nodes and the lungs. The diagnosis is based on clinical findings and the identification of the fungus in histological material or in culture. The disease is treated with itraconazole, and the prognosis is generally good.

Conclusions: Sporotrichosis is a disease of public health importance due to its high prevalence and the need for early diagnosis, surveillance of resistance and prevention of the epidemic trend of the disease over the years.

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Candida species in the bloodstream of patients from a tertiary hospital in southern Brazil

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Objectives: To evaluate the presence of candidiasis in a tertiary hospital in southern Brazil over a period of around one and a half years, to analyze and discuss the characteristics and challenges of the disease.

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Conclusions: Candida species are important pathogens associated with sepsis in our hospital, corresponding to around 5% of the bloodstream infections in patients hospitalized, independently of their age or risk factors. These data raise awareness of the need for early diagnosis, surveillance of resistance and prevention of the bloodstream infection to optimize the treatment, and promote a better prognosis for critical patients.

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Clinico- microbiological profile of post-COVID pulmonary fungal infections encountered during the second wave of COVID-19 pandemic at a tertiary care teaching hospital in the Himalayas

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Objectives: To generate preliminary data about post-COVID pulmonary fungal infections in the Himalayas and analyze patients’ micro-radio-clinical profiles and outcomes.

Methods: We conducted a retrospective study at a tertiary care teaching hospital in the Himalayas to generate preliminary post-COVID pulmonary fungal infections data.Spirotrichum tubicola (SB), and Rhizomucorales longae isolate samples of patients sent to the Mycology laboratory were subjected to KOH mount and aerobic inoculation on Sabouraud dextrose agar plates at 37°C. The patients’ symptoms, diagnosis, clinical-radiological profile, and outcome were collected from the database.

Results: Among n = 14 cases of post-COVID pulmonary fungal infections aged 18 to 72 years, n = 7 (47.7%) had Pseudallescheria boydii (n = 3) and Alternaria sp. (n = 1). The most common fungus identified was Alternaria sp. followed by Pseudallescheria boydii. The median age of patients was 59 years. Most of the patients were admitted due to respiratory distress and severe hypoxia. The most common symptoms were cough, fever, and dyspnea. The patients were treated with antifungal therapy, and the mortality rate was 28.57% (n = 4). The most common complication was sepsis, followed by respiratory failure. The most common treatment was high-flow nasal cannula and noninvasive intermittent positive pressure ventilation. The most common site of pulmonary involvement was the lower lobes.
the third patient, while only A. fumigatus was cultured on his SDA Agar. Aspergillus flavus and R. arrhizus were isolated simultaneously from the sputum of the last patient, but only R. arrhizus was identified on KOH microscopy.

Clinical symptoms were similar among Pulmonary Aspergillosis and Macrophagocytosis patients, but hemorrhage was reported only among Pulmonary Aspergillosis patients. Pre-existing co-morbid end-organ damage, AKI, CVD, CAD, COPD, and CAD were more common among Pulmonary Macrophagocytosis patients and rare among Pulmonary Aspergillosis patients. Treatment requirements and clinical outcomes of patients infected with either mold were similar. The clinical profile of mixed infection patients was notably different from the others. All the patients were males, none complained of shortness of breath or dyspnea, and none had a history of PFT, AKI, CVD, CKD, COPD, or CAD. Only 2 (15%) mixed infection patients needed supplemental high flow oxygen, unlike all (100%) patients diagnosed with single mold infection. None of the mixed infection patients required steroids. Moreover, none of the mixed infection patients had, unlike 60% mortality in cases of single-species infections.

On radiological investigation, a 6 had typical thick-walled cystic lesions with air-fluid levels and multiple centrifocal nodules giving a true in bud appearance, of which a 4 had bilateral lung involvement, and a 2 had only one lung involved. a 1 patient had a well-circumscribed lung abscess.

Conclusion: COVID patients from the Himalayas had a higher prevalence of invasive pulmonary fungal infections, probably due to the dense surrounding vegetation. The immune-compromised state following COVID-19 infection/treatment might be responsible for the progression of regular exposure to invasive pulmonary infection.

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Invasive Pulmonary Aspergillosis (IPA) Among Non-Intubated COVID-19 Patients—a New Age Fungal Storm

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Poster session 2, September 22, 2022, 12:10 PM - 1:30 PM

Introduction: COVID-19 patients are at higher risk for the development of secondary infections, especially fungal due to multiple risk factors associated with COVID illness and its management. COVID-associated pulmonary aspergillosis (CAPA) is a new clinical entity that is contributing to high mortality and morbidity among immunocompromised COVID-19 patients. Lack of adequate published literature, absence of typical host factors, and lack of specific diagnostic criteria and management algorithms add to the difficulty in early diagnosis and treatment initiation. The scant available data is on CAPA among intubated patients, however, there are no data on CAPA in non-intubated COVID-19 patients.

Objectives: The aim of our study was to assess the occurrence of IPA among non-intubated COVID-19 patients and its correlation with their demographic profile, risk factors, morbidity, and outcome.

Methods: This observational study included 24 non-intubated CAPA patients and 72 controls (1:3 randomly selected age and sex matched) at our hospital between April-June 2021. CAPA cases were defined as per modified-Aspergillus criteria. Demographic characteristics, risk factors, treatment, factors contributing to morbidity, and outcomes were evaluated. Discriptive statistics were reported as mean ± SD, median, number, and percentage. The proportion of CAPA was reported as frequencies and percentages. Clinical characteristics were compared between CAPA and control using Chi-squared, independent t test and Mann-Whitney U test as appropriate. Association of CAPA with mortality was performed using P-value exact test. Logistic regression was performed to assess the factors associated with CAPA. P-value <0.05 was considered statistically significant. All analyses were performed using SPSS 25.0.

Results: A total of 4018 COVID patients were admitted during the study period. Respiratory samples of 26 patients yielded Aspergillus species. Two patients were excluded as colonizers based on modified Aspergillus criteria. In all, 24 CAPA cases 72 controls were studied for all the variables. CAPA occurrence was 0.59% among non-intubated COVID-19 patients (24/4018).

Both the groups had a male predominance (75% CAPA, 80% control), the median age was 52.8 ± 14.3. Demographic data and risk factors were comparable. There were no significant differences in lab parameters between the groups. Association of COVID severity and development of CAPA was not statistically significant (OR 2.25, 95% CI, P-value = 0.06, sensitivity 6.44, 95% CI, P-value = 0.08). Significant associations between the cases and controls included; treatment with a higher dose and longer duration of steroids with development of CAPA (OR 1.09, 95% CI, P-value = 0.02), durationOR 1.09, 95% CI, P-value = 0.06), longer hospital stay (median of 16.8 ± 10.4 days Vs. 10.9 ± 4.8 days, P-value = 0.001). All-cause mortality was 16.7% in CAPA group (P-value < 0.001).

Between CAPA non-survivors and survivors, serum galactomannan levels (P-value = 0.01), duration of hospital stay (P-value = 0.02), dose and duration of systemic corticosteroid (P-value = 0.01), and duration of oxygen requirement (P-value = 0.05) were found to be statistically significant.

Conclusion: CAPA is an emerging complication with high morbidity and mortality among immunocompromised COVID-19 patients that requires a high index of clinical suspicion. A standard diagnostic criteria and management protocol for early identification and treatment initiation is the need of the hour. Role of steroids in the development of CAPA and the role of galactomannan in diagnosis and prognosis of CAPA needs to be further investigated.

Table: Comparison of clinical characteristics between CAPA and control group

|            | CAPA | Control | Unadjusted OR | P value |
|------------|------|---------|---------------|---------|
| Age        | 52.9 ± 14.3 | 52.8 ± 14.4 | 1.01 (0.96, 1.04) | 0.982   |
| Duration of hospital stay | 18.4 ± 10.7 | 12.9 ± 7.6 | 1.07 (1.02, 1.12) | 0.549   |
| White blood cell | 9.5 (5.12, 12.4) | 7.9 (5.80, 10.1) | 0.40 | 0.649    |
| Creatinine | 0.80 (0.68, 0.97) | 0.70 (0.71, 1.68) | 0.74 (0.17, 3.24) | 0.645   |
| Blood sugar | 78.4 (27.4, 89.7) | 99.9 (99.6, 100.2) | 0.871 | 0.436    |
| CRP at admission | 6.20 (2.25, 10.3) | 6.79 (2.94, 14.2) | 0.03 (0.005, 0.508) | 0.408   |
| LDH at admission | 402 (277, 573) | 306 (199, 449) | 0.09 (0.004, 0.19) | 0.049   |
| D Dimer | 315 (354.5) | 368 (233, 644) | 0.173 | 0.137    |
| Ferritin | 1021 (560, 1760) | 753 (410, 1215) | 0.002 | 0.002    |
| Steroids total dose | 110 (55, 112) | 85 (45, 117) | 0.003 | 0.002    |
| Duration of steroids | 13.8 (5.07, 18.4) | 8.2 (5.15, 14.7) | 0.001 | 0.001    |
| Severity | 0 (0, 1) | 0 (0, 1) | 1.00 | 1.00     |
| Mortality | 0 (0, 1) | 0 (0, 1) | 1.00 | 1.00     |
Brain phaeohyphomycosis secondary to immunosuppressant therapy due to Rhinocladiella mackenziei

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Two cases of Rhinocladiella mackenziei have been noted in our institute, the first case in 2015 (post-renal transplant) and the second case in 2021 (post-COVID infection). Both the patients had received immunosuppressants for varying durations. Both the cases presented to the hospital with neurological deficit secondary to brain abscess. On initial assessment, the melanized fungus was noted which was later identified as Rhinocladiella on culture and further confirmed with molecular methods. Both the cases were treated with injection of L AmB, voriconazole and 5FC for a prolonged duration and later discharged when the condition improved. The renal transplant patient was advised lifelong voriconazole since he would continue to be on immunosuppressants. To our knowledge, the second patient diagnosed post-COVID could be the first case report of invasive dematiaceous fungal infection in an apparently immunocompetent individual. Both cases also highlight the challenges in management such as designing an appropriate regimen, deciding the optimum duration of antifungal therapy, and managing the toxicities associated with long-term antifungal use. R. mackenziei is a frequently fatal melanized neurotropic fungus known to carry almost 100% mortality despite the combination of antifungal agents and surgery. Central nervous system infections due to R. mackenziei have been exclusively reported from the Middle East, except for cases recently reported from India.