Prolonged mechanical ventilation support was associated with the development of nosocomial candidiasis and mucormycosis.

Methods: A retrospective study conducted over a period of 10 months from August 2018 to January 2020, which included 100 patients attending the Ophthalmology OPD with features of keratitis. Ophthalmological examination was followed by corneal scraping /collection, which were subjected to culture, microscopy, and molecular diagnostic tools. Bacterial isolates were identified by conventional methods and by automated bacterial identification system while the fungal isolates were identified by conventional and by automated fungal identification system. Pathogenic fungi were cultured on Sabouraud dextrose agar, potato dextrose agar, and blood agar. Fungal isolates were also subjected to biochemical tests and to amplify specific fungal species by polymerase chain reaction (PCR).

Results: Of the 100 patients studied, 54 (54%) had bacterial keratitis, 46 (46%) had fungal keratitis and 10 (10%) had mixed keratitis. A total of 185 bacterial strains and 16 fungal strains were isolated. The most common isolates in patients with bacterial keratitis were Staphylococcus aureus (30%) followed by Streptococcus pneumoniae (18%) and Klebsiella pneumoniae (11%). In patients with fungal keratitis, the most common isolates were Fusarium oxysporum (25%) followed by Aspergillus fumigatus (15%) and Candida albicans (10%). The most common pathogens identified in patients with mixed keratitis were Mycobacterium tuberculosis and Sarcina liquefaciens.

Conclusions: This study highlights the importance of performing thorough ocular and systemic examinations, as well as early institution of appropriate antimicrobial therapy, to prevent the development of serious complications in patients with corneal infections.