Objective: Candida infections are known contributors to the high morbidity and mortality rates seen in HIV-positive patients, especially in underdeveloped countries. Candidiasis is commonly present in the mouths of these individuals, with Candida albicans being the most commonly identified species. The prevalence of drug-resistant Candida species in HIV-positive populations in South African has, to our knowledge, not previously been compared with HIV-positive populations in other parts of Africa and the possible emergence of drug-resistant species is a cause for concern that deserves to be investigated.

Method: In this study, Candida isolates were collected from the oral mucosa of 128 South African and 126 Cameroonian HIV-positive patients, by scraping the mouths of consenting patients using sterile cotton swabs. Ethics clearance for this project was granted by the University of the Western Cape. Confirmation of Candida species was done by growth on differential media, Gram staining and microscopy. The isolates were grown on selective media and differentiated using two commercial chromogenic agars and Tomato (V8) agar. Changes in colony colour, morphology and pseudohyphae/chlamydospore expression could then be observed, allowing for species differentiation. Isolates were also examined for antifungal susceptibility patterns using the TREK system.

Result: The results from this study suggest that the prevalence of Candida species varies according to geographical region and HIV-subtype. Discrepancies in antifungal drug susceptibility patterns were also observed in the two populations.

Conclusion: The emerging drug-resistance raises the need for increased species prevalence surveillance, as this information can have clinical implications in the choice of more appropriate and effective patient treatment.

This abstract is based on research that was funded entirely or partially by an outside source: National Research Foundation of South Africa

Keywords: Antimicrobials, Candida, Fungi, HIV infection and Microbiology

Presenting author's disclosure statement: There are no conflicts of interest.