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# Drug susceptibility profiles of *Candida* species isolated from the oral mucosa of HIV-positive West African patients using the TREK Sensititre system

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**Background:** *Candida* infections are a common cause of death in immunocompromised patients. The prevalence and anti-mycotic drug susceptibility profiles of *Candida* species from Cameroon in Africa are unavailable. This study was prompted by an increasing incidence of treatment failure. Drug susceptibility profiles, necessary to improve treatment outcomes, is particularly important in countries where the sale of antimicrobials and antifungals is uncontrolled and resistance may emerge due to the indiscriminate use.

**Objective:** The goal of this study was to characterize and determine drug susceptibility of oral *Candida* species in Cameroonian patients with HIV/AIDS. Materials and Methods: *Candida* species were isolated from the oral cavity of 126 HIV-positive patients attending a local HIV/AIDS clinic in the Cameroon. Drug susceptibility to azoles and echinocandins was determined using the commercial TREK Sensititre® YeastOne™ platform that provides the minimal inhibitory concentration of amphotericin B, 5-flucytosine, anidulafungin, caspofungin, micafungin, fluconazole, itraconazole, posaconazole, and voriconazole.

**Results:** Ninety two isolates identified were *Candida albicans*. Remaining isolates were *C. glabrata* (24), *C. tropicalis* (4), *C. krusei* (3), *C. parapsilopsis/lusitaneae/keyfr* (2), and one isolate was *C. dubliniensis*. More than 50% of C. albicans isolated were resistant to azoles but 115 *Candida* species (87%) were susceptible to amphotericin B. Twenty one of the twenty four *C.glabrata* identified (88%) were resistant to micafungin. The majority of Cameroonian *Candida* species were sensitive to flucytosine (5-FC) (95%) and echinocandins (79%).

**Conclusions:** The report of azole resistance in all *Candida* species isolated from immunocompromised patients in Cameroon is a new and important observation. We found the approach using a broad screening platform an effective means to obtain data rapidly. We propose confirmation of these data and regional surveillance of *Candida* species in other areas in Cameroon and surrounding countries to develop an effective public health management and treatment strategy.

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