In vitro antimicrobial properties of coconut oil on Candida species in Ibadan, Nigeria.

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Abstract

The emergence of antimicrobial resistance, coupled with the availability of fewer antifungal agents with fungicidal actions, prompted this present study to characterize Candida species in our environment and determine the effectiveness of virgin coconut oil as an antifungal agent on these species. In 2004, 52 recent isolates of Candida species were obtained from clinical specimens sent to the Medical Microbiology Laboratory, University College Hospital, Ibadan, Nigeria. Their susceptibilities to virgin coconut oil and fluconazole were studied by using the agar-well diffusion technique. Candida albicans was the most common isolate from clinical specimens (17); others were Candida glabrata (nine), Candida tropicalis (seven), Candida parapsilosis (seven), Candida stellatoidea (six), and Candida krusei (six). C. albicans had the highest susceptibility to coconut oil (100%), with a minimum inhibitory concentration (MIC) of 25% (1:4 dilution), while fluconazole had 100% susceptibility at an MIC of 64 microg/mL (1:2 dilution). C. krusei showed the highest resistance to coconut oil with an MIC of 100% (undiluted), while fluconazole had an MIC of > 128 microg/mL. It is noteworthy that coconut oil was active against species of Candida at 100% concentration compared to fluconazole. Coconut oil should be used in the treatment of fungal infections in view of emerging drug-resistant Candida species.

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