



De La Salle University - Dasmariñas
GRADUATE PROGRAM

**CLINICO-DEMOGRAPHIC AND RISK CHARACTERISTICS OF WOMEN
PATIENTS OF REPRODUCTIVE AGE AT THE DE LA SALLE UNIVERSITY
MEDICAL CENTER (DLS-HSI) AND THE MORPHO-PHYSIOLOGICAL
AND ANTIFUNGAL SENSITIVITY PROPERTIES OF THE
CANDIDA SPECIES ISOLATED**

A Research Paper Presented to
The College of Science Graduate Studies
De La Salle University – Dasmariñas

In Partial Fulfilment of the Requirements
for the degree of Master of Science in Biology

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MAY 2009



ABSTRACT

Vulvo-vaginal candidiasis (VVC) is a common universal problem encountered that affects a large fraction of women in a population. This study was conducted to determine the relationship of clinico-demographic and risk characteristics of women patients of reproductive age at the De La Salle University Medical Center to the prevalence of *Candida* species, and to evaluate the *in-vitro* sensitivity of the isolated *Candida* species to six commonly used antifungal agents.

Preliminary isolation of *Candida* species was done using the Brain Heart Infusion Broth (BHIB) and subcultured on Saboraud Dextrose Agar (SDA). Gram-staining was also performed to ensure that the collected species were yeasts. Presumptive test of the isolates was done using the CHROMagar *Candida*. Identified yeast isolates were tested for Germ Tube and Chlamyospore formation to confirm the presence of *C. albicans* while API *Candida* was used to identify the *Candida* species. Sensitivity test was done using the six common antifungal drugs. Frequency, ranking and chi-square tests were performed.

Of the 96 clinical samples, 54 (56.25%) developed green colonies which are characteristic of *C. albicans*, 33 had (34.37%) pink to violet colonies distinctive for *C. krusei*, six (6.25%) had cream-colored colonies the characteristic of *C. parapsilosis*, and only three (3.12%) had dark blue colonies for *C. tropicalis*.

Representative *Candida* isolates developed color reactions to different sugars, and enzymes in API *Candida*. *C. albicans* were positive for germ tube and chlamyospores.

From a total of 86 respondents, less than one third (30.23 %, 26) were from the out-patient charity department and 69.77 %, 60 came from the out-patient private physician's clinic. Out of the total respondents, the prevalence of *Candida* species were 32 (33.33%) out of the total population were 18 (56.25%) belonged to *C. albicans*, 11 (34.37%) *C. krusei*, two (6.25%) *C. parapsilosis* and one (3.12%) *C. tropicalis*.

Among the patients who are symptomatic and asymptomatic for candidiasis, thirty two (37.2%) out of 86 patients were identified positive for the presence of *Candida* species. Respondents between 41 and 45 years old had the highest frequency of *Candida* infection (9, 28.12%). Majority of the respondents positive for candidiasis were married, and the highest frequency of occurrence of *C. albicans* was found among women with one to two children.

Out of 32 respondents, two (6.25%) had sexual contact with someone having candidiasis. *Candida* species were isolated from both of



respondents. *C. krusei* were isolated from patients who had sexual contact with the same sex. A total of three (9.37%) patients had multiple sex partners. There were 11 (34.37 %) *Candida species* isolated from patients with history of candidiasis in the family. Based on actual contact with the disease, 19 (59.37%) were positive for *Candida species*. Majority of patients who were suffering from dysmenorrhea during menstruation harbored *Candida species*. More than 50% of the patients who did not use contraceptive methods harbored more *Candida* isolates than those who adopted contraceptive methods.

Vaginal and labial itchiness and abnormal discharges showed the highest distribution for *Candida species* among the manifestations of VVC.

Antifungal susceptibility testing revealed that eighty (83.33%) out of the 96 *Candida species* isolates were susceptible to amphotericin-B, 38 (39.58%) to Griseofulvin, 72 (75.00%) to Sporonox, 21 (21.88%) to Nizoral, 15 (15.63%) to Diflucan and 78 (81.25%) to Nystatin.

C. albicans is the most prevalent species associated to VVC. In relation to this, women between the age of 36-40 and 41-45 who are married have the highest risk of having such infection. Antifungal prescription should be only given once the proper identification of the *Candida species* has been performed. Improperly prescribed antifungal agents may lead to drug resistance.

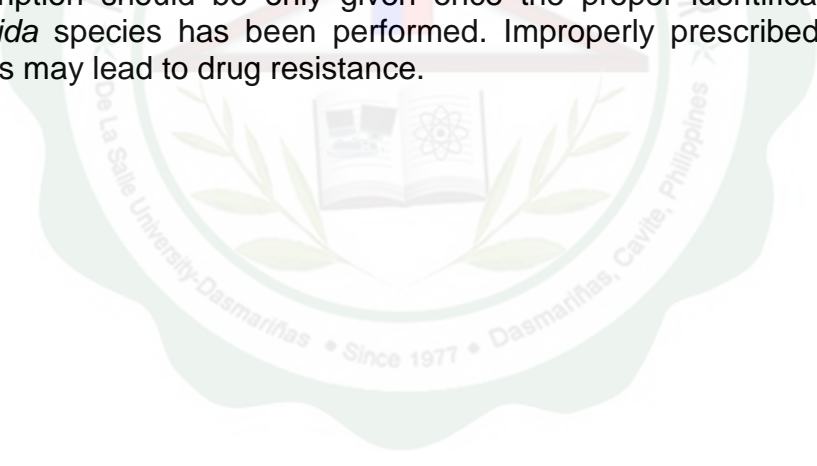




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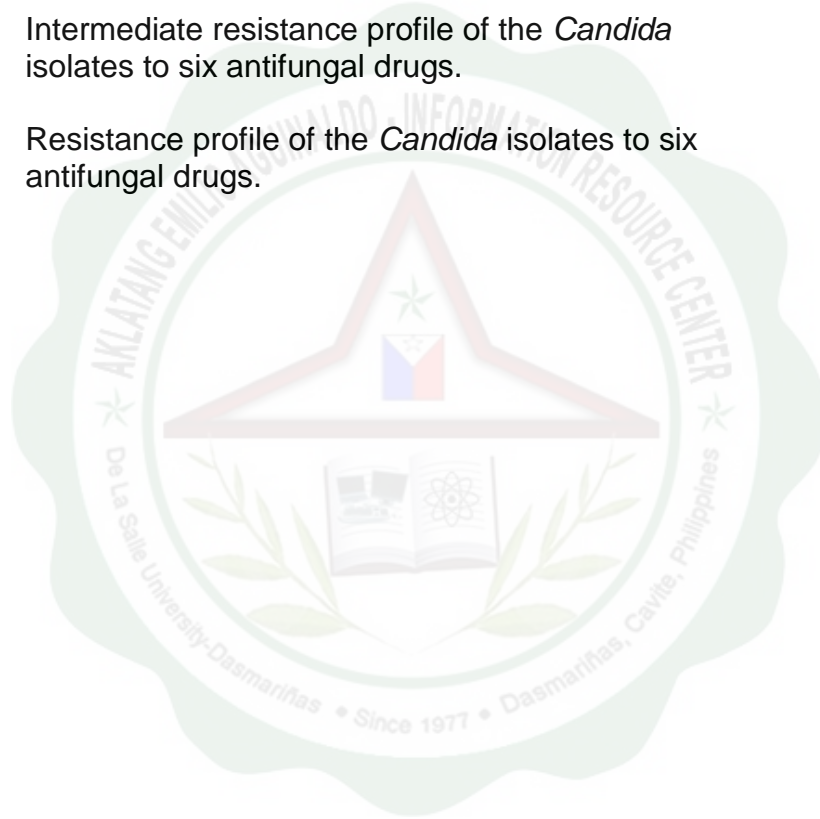
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