Summary

A total of 150 samples (50 vaginal swabs , 50 urine samples and 50 oral swabs) of patients at many age group range from 1to 50 year old and for both sex were collected from patients suffering from vaginal candidiasis, oral thrush and urinary tract infection who attending the Samawah Teaching Hospital for pediatrics and Gynecology of AL-Muthanna and AL-Diwanyia governorates ; Through the period which extended from October 2010 to May 2011.

The isolation and identification methods of yeast isolates were followed upon the morphological, cultural and biochemical characteristics, in addition, the confirmative systems such as CHROMagar Candida and Api *Candida* were done for differentiation among *Candida* species. The phenotypic results showed that the isolation percent of *Candida albicans* was 63%, while the other species such as *Candida glabrata*, *Candida krusei* and *Candida tropicalis* were isolated with the percents (14.2%, 8.69%, 7.6%) respectively. On the other hand, the percentage of yeasts such as *Trichosporon* sp. and the *Geotrichum* sp. were 5.43% and 1.08% respectively.

Some virulence factors of *Candida* species such as germ tube formation , chlamydospores production , the ability of growth in 45C◦ and antifungal susceptibility profile were detected. The results of germ tube formation showed that 61(66.30%) isolates were able to produce germ tube for *Candida albicans* and *Candida dublinensis* while 31(33.69%) isolates were negative for other *Candida* species .The results of chlamydospore showed that 66 isolates of 92 (71.73%) were positive for the production of chlamydospores and *Candida albicans* also growth

in 45C◦ but *Candida dublinensis* did not show any growth on SDA at 45C◦ . Through the daily assessment of growth at all isolates for 10 days.

The study also showed that the PCR assay using the primers (LH1 and LH2) of integrin- like protein gene specific for *C. albicans* (pathogenic form), and its amplicon size was 344 bp, while the other tested *Candida* species and *Candida albicans* (normal flora) were not amplified.

Regarding the results of susceptibility of *Candida* isolates towards antifungals, all the tested isolates were susceptible to amphotericin B , with $MIC_s \leq 1\mu g/ml$ with the exception of a single isolate of *C. krusei* which was less susceptible than any other species with MIC_s of 2 µg/ml and MIC_{50} of 2. The MIC_s to amphotericin B was from 0.125 to 2 µg/ml. In general, *Candida* sp. showed higher MIC_s than *C. albicans* isolates. The MIC_s to fluconazole was from 0.25 to 64 µg/ml. All isolates were highly sensitive to fluconazole with the exception of *C .krusei* which showed a high MIC (32) and MIC_{50} and MIC_{90} of 64 and 32 µg/ml respectively. The MIC_s to itraconazole was from 0.015 to 1.0 µg/ml. Most *C. albicans* isolates were sensitive to itraconazole. *Candida* sp. showed relatively lower susceptibility.