

PREVALENCE OF CANDIDIASIS AMONG PEOPLE. A RETROSPECTIVE CROSS SECTIONAL STUDY IN IRAQ***Dr. Israa Tareq Mahmood**

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ABSTRACT

Background: Candidiasis is an infection caused by Candida fungi, most of by Candida albicans.[1] These fungi are found almost everywhere in the environment. **Aim:** To determine the prevalence of candidiasis among people at different age groups which are attending the clinics in the hospitals during the study period. **Methods:** A retrospective cross sectional study was carried out at the Life Statistics Center of the Iraqi Ministry of Health within 6months. During this period, the study samples were 24149. Data was entered to Excel sheet and the STATA software program was used to analyze this data and make tables. **Results:** - The highest percentage of cases were (78.1%) in the age 15 to 49 years old, (2.8%) were male and (97.2%) were female [Table 2]. The high frequency of cases occurred in Baghdad (32.2%), followed by (13.8%), (12.3%) in Niveh, Salah Al-Deen, respectively. **Conclusion:** Majority of cases occurred in the age groups 15 to 49 years old, the female cases were more than male cases. The most of cases occurred in the east and north of Iraq. We need awareness of the burden of fungal infections by the healthcare stakeholders in Iraq.

KEYWORD: Candidiasis, Prevalence, Iraq, Gender, Age.**INTRODUCTION**

Candidiasis is an infection caused by Candida fungi, most of by Candida albicans.^[1] These fungi are found almost everywhere in the environment.^[2] Some may live harmlessly along with the abundant "native" species of bacteria that normally colonize the mouth, gastrointestinal tract and vagina.^[3] Usually, Candida is kept under control by the native bacteria and by the body's immune defenses.^[4] If the mix of native bacteria is changed by antibiotics or the body moisture that surrounds native bacteria undergoes changes in its acidity or chemistry, it can allow yeast to thrive and cause symptoms.^[5] Candidiasis can affect many parts of the body, causing localized infections or larger illness, depending on the person and his or her general health.^[6] Candida infections can cause symptoms in healthy people.^[7] Usually the yeast infections are limited to the mouth, genital area or skin.^[7] However, people with a weakened system from illness or medications such as corticosteroids or anticancer drugs are not only more susceptible to topical infections; they also are more likely to experience a more serious internal infection.^[8] The Candida vaginitis rate in Jordan was 3097/100,000 and in Iraq, Saudi Arabia, Egypt, and Algeria were 2664, 3320, 3169, and 2402 per 100,000, respectively.^[9,10,11,12,13] Oral candidiasis in Jordan was estimated at 0.22/100,000 in the general population, and esophageal candidiasis 0.21/100,000 population.^[14] Because of the conditions in our country is

going through and the deterioration of the health status, there is no focus on awareness and hygiene among people of different ages, especially among adults, which led to a high incidence of this disease. The aim of this study was to determine the prevalence of candidiasis among people at different age groups which are attending the clinics in the hospitals during the study period.

METHODS

A retrospective cross sectional study was carried out at the Life Statistics Center of the Iraqi Ministry of Health within 6months. During this period, the study samples were 24149. Data was entered to Excel sheet and the STATA software program was used to analyze this data and make tables.

RESULTS

Out of 24149, the highest percentage of cases were 18871/24149 (78.1%) in the age 15 to 49 years old, followed by 4592/24149 (19.1%) were in the age more than 50 years old and 686/24149 (2.8%) of cases were in the age less than 14 years old [Table1]. Also, 685/24149 (2.8%) were male and 23464/24149(97.2%) were female [Table 2]. The high frequency of cases occurred in Baghdad 7775/24149(32.2%), followed by3321/24149 (13.8%), 2960/24149 (12.3%) in Niveh, Salah Al-Deen, respectively [Table3].

Table 1: Distribution of studied sample according to age groups.

Age groups	Frequency	Percent
0-14	686	2.8
15-49	18871	78.1
More than 50	4592	19.1
Total	24149	100

Table 2: Distribution of studied sample according to gender.

Gender	Frequency	Percent
Male	685	2.8
Female	23464	97.2
Total	24149	100

Table 3: Distribution of studied sample according to health directorate and number of cases.

Health directorate	Frequency	Percent
Baghdad	7775	32.2
Basra	122	0.6
Nineveh	3321	13.8
Maysan	93	0.4
Al-Dewaniya	2636	10.9
Diala	379	1.6
Al-Anbar	NA	-
Babylon	230	0.9
Kerbela	663	2.7
Kirkuk	814	3.4
Wasit	292	1.2
Thi-Qar	543	2.2
Almuthanna	780	3.2
Salah-Aldeen	2960	12.3
Alnajaf	294	1.2
Erbil	1886	7.8
Duhok	1361	5.6
AlSulaimaniya	NA	-
Total	24149	100

NA. Not available

DISCUSSION

Candida is usually a commensally fungus residing on the skin, mucosa of the vagina, and gastrointestinal tract in about 30%–50% of healthy adults.^[15] In this study we found the most vulnerable groups were in the age 15 to 49 years old and compared with other result in Senagal^[15], the authors reported the female in the reproductive age were the high risk groups for illness infection, also the male cases but in less. Another study in Tanzania^[16], the investigators reported the age less than 25 years old were the most age-prone to disease. The authors reported the adult people are more comfortable to illness more than other groups.^[17] This refers to differ in lifestyle between countries and also the behaviors among people. Also, in present study we found the majority of cases were female 97.2% and compared with other study in Mexico^[18] and in Spain^[19] the authors

reported the female cases are more susceptible to illness more than male. These may be referring to the type of female work and lack awareness about the danger of disease; less health education, lack of health system and the facilities unavailable. The disease was high in east and north of Iraq. Other study in china^[20], the authors reported the disease was high in different region and a study in Iraq, the disease was occurred in south of Iraq.^[10] These refer to difference of attitude and customs between countries.

CONCLUSION: Majority of cases occurred in the age groups 15 to 49 years old, the female cases were more than male cases. The most of cases occurred in the east and north of Iraq. We need awareness of the burden of fungal infections by the healthcare stakeholders in Iraq, to include fungal infections in the official Ministry of Health surveillance registry, and to urge hospitals through the Health Care Accreditation Council to include fungal infections and their susceptibility in a reporting system, comparable to bacteria and their drug resistant patterns, is necessary. Worldwide, continued efforts are needed at many levels to have their share in better fungal diagnostic methods to guide early intervention and management, as well as controlling resistance by prohibiting the use of anti-infective agents, including antifungals in the food industry. Those concerned levels include, but are not limited to, ministries of health, international organizations, the pharmaceutical industry, healthcare professionals, and stakeholders in agriculture, veterinarians, and the livestock industry.

Competing interests

The authors declare that they have no competing interests.

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