



Identifying Risk Factors of Patients with Ulcerative Colitis

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ABSTRACT

Background: Ulcerative colitis a lifelong inflammatory illness is marked by persistent inflammation of the mucosal surface that begins in the rectum and spreads toward the influence of a portion or the entire colon, the disease has different periods from severity or exacerbation to remission.

Objectives: The aim of this study was to explore risk factors of patients with Ulcerative Colitis.

Methodology: A descriptive cross-sectional study was conducted using a purposive sample of 105 patients diagnosed with ulcerative colitis attending to specialized hospital for gastroenterology and hepatology at Al-Najaf Al-Ashraf city. Study extend period from September 1, 2023 to June 1, 2024. This study used self-administrated questionnaires adopted from the previous studies consist of two-part demographic and clinical forms items. Data collected were analyzed using SPSS version 25.0.

Results: The findings of the current study involved that the highest percentage of the patients are those at young ages, female patients, graduated from college, married, live in urban, unemployed, and financially secured. According to the participants' clinical data, the results showed that the highest percentage of the patients are those with some factors that may have direct influence on disease prognosis. For example, duration of the disease, family history of ulcerative colitis, chronic disease, with sleeping patterns as well as medication adherence and others.

Conclusion: Ulcerative colitis (UC) disease commonly found in individuals within the age group (18 – 36) years old.

Recommendations: The study recommended that nurses need to be more aware in performing nursing care for patients within age group (18 - 36) years old in terms of assessing clinical features of ulcerative colitis. Nurses who recognize the risk factors of ulcerative colitis may intervene and manage patient's condition effectively. More researches are needed to address specific risk factors and find solution to avoid it if possible.

Keywords: Ulcerative Colitis Disease, Risk Factors.

INTRODUCTION

Healthcare providers need to recognize the most relevant risk factors in order to intervene and manage ulcerative colitis effectively. Functional gastrointestinal disorders (FGIDs), also known as

conditions of gut-brain interaction (DGBIs), are gastrointestinal (GI) diseases caused by any amalgamation of motion disruption, visceral sensitivity, changed mucosal and immune responses,

influenced microbiota in the gut, and changed central nervous system (CNS) process. A lifelong inflammatory illness is marked by persistent inflammation of the mucosal surface that begins in the rectum and spreads toward the influence of a portion or the entire colon, the disease has different periods from severity or exacerbation to remission ⁽¹⁾.

This kind of diseases have a huge impact on worldwide healthcare expenditures, as well as reduced health-related quality of life (HRQOL) ⁽²⁾. Physical, psychological, environmental and Social variables have an impact on the quality of life (QoL) of people with UC, leading to significant changes in their lives. The patients' and their families' lives become more complicated and limited as a result of these changes in living patterns, which ultimately lowers their quality of life ^(3, 4, 5, and 6).

The main risk factors for ulcerative colitis involve, first-degree relatives are four times more likely to develop ulcerative colitis than people with ulcerative colitis, with a family history accounting for 8–14% of cases. Compared to other ethnic groups, Jews have greater prevalence of ulcerative colitis ⁽⁷⁾. Moreover, the age distribution of UC is bimodal with an incidence peak occurring in the second or third decades of life the age range of 15–29 years old has a significant occurrence of UC, and a second peak occurring between the ages of 50 and 80. Epithelial barrier abnormalities, altered immunological responses, microbial dysbiosis, and environmental variables are risk factors for ulcerative colitis (UC). Some possible environmental factors that may contribute to the development or activity of ulcerative colitis (UC) include the mode of birth, breastfeeding, and antimicrobial exposure. Other factors include air pollution, smoking, psychological state, exercise, and nutrition ⁽⁸⁾.

Individuals can get ulcerative colitis at any age, starting in childhood, although the frequency is identical in men and women and peaks in early adulthood ⁽⁹⁾. Additionally, the careless use of medications, particularly antibiotics, which have the

potential to change the gut flora and promote dysbiosis, which is an imbalance among pathogenic and commensal microbiota is known as dysbiosis. It is widely established that the incidence of inflammation and ulcerative colitis disease is reduced when the many species of bacteria, fungi, and viruses in the intestines have a balanced relationship ⁽¹⁰⁾. In addition to, a life style has been linked to ulcerative colitis. The strongest data suggests that smoking may be a preventive factor against ulcerative colitis. Additionally, research has indicated that physical activity can prevent UC ⁽¹¹⁾.

AIMS OF THE STUDY

The aim of this study was to explore risk factors of patients with Ulcerative Colitis.

METHODOLOGY

This descriptive study aimed to investigate risk factors of patients with Ulcerative Colitis among patients attending attending to specialized hospital for gastroenterology and hepatology at al-najaf al-ashraf city. The study spanned from September 1, 2023, to June 1, 2024. A non probability (purposive) sampling technique was employed to select 105 patient's diagnosis with ulcerative colitis, depending on the following criteria: All cooperative patients who had willing to participate in the study and are medically diagnosed with ulcerative colitis. Moreover, adult patients aged between (18_65) years old, patient has no psychological disorders, according to the doctor's assessment, patients free from other chronic diseases, patients whose condition is stable and not critical.

In this study, two interview questionnaires used were as follows: I: Socio Demographic Questionnaire includes gender, age, residences, marital status, level of education, occupation, accommodation type and amount of monthly income. II: Clinical data consists of fifteen items including: Duration of illness, family history, digestive symptoms, chronic diseases, skin lesions, eye lesions, previous intestinal surgeries,

sleep disorders, extent of adherence to medication, number of hospital visits, extent of adherence to a healthy diet, taken iron supplements, taken vitamins, smoking, and body mass index (BMI).

Rating and Scoring:

The scale consists of 26 items distributed over domains, and the rating for each question ranges from 1 (lowest score) to 5 (highest score), with the exception of three items whose score is in the reverse direction, meaning 1 (highest score) and 5 (lowest score), after computed the scores, they are transformed linearly to a 0_100 scale. Mean of Scores for the domains of quality of life; poor QoL: MS= 0-33.33; Moderate QoL: MS= 33.34-66.67; good QoL: MS \geq 66.68.

Data Collection Procedure:

During data collection, the researchers used self-report method to collect subjective data for all patients with ulcerative colitis to fill out the questionnaire. A face-to-face interview method was used to collect data from participants. The duration for the data collection procedure is started from 19th November, 2023 to 19th December 2023. Descriptive and Inferential data analysis is used to analyze the findings.

Ethical consideration:

The study received approval from the Scientific Research Ethical Committee at the College of Medicine, University of Kufa, with an ethical approval number issue day/month/year. Informed written consent was secured from participating patients, ensuring voluntariness and the option to withdraw at any time. Confidentiality of collected data was strictly maintained. The researcher provided clear explanations of the study aims to the patients and obtained verbal consent.

RESULTS

Table (1) is about statistical distribution of participants according to their demographic data. It explains that the highest percentage of the patients subgroup are: Patients with ages between (18-36)

years old (53.3%), female patients (56.2%), those who graduated from college (22.9%), those who are married (60%), those who live Urban residents (84.8%), those who are unemployed (44.8%), those with Sufficient to some extent monthly income (55.2%), and those who have their own house (84.8%).

Table (2) is about statistical distribution of participants according to their medical history. It explains that the highest percentage of the patients subgroup are: those with disease duration between 1-5 years (62.9%); those with no family history of UC (76.2%); those with no chronic disease (100%); those who have no skin ulcers (67.6%); those who have no eye ulcers (67.6%); those with no previous surgery (86.7%); those with sleep disorders (70.5%); those adherence to UC medication (53.6%); those with one hospital visits every month (68.6%), those that have no healthy foods (56.2%); those have no iron supplement (75.2%), those have no vitamin supplement (61%), those with no smoking (86.7%), those with normal BMI (54.3%).

Figure (1) is about statistical distribution of symptoms among patients. It explains that about (102) of patients have abdominal pain; while only (22) of them have vomiting.

DISCUSSION:

The present study investigated the patient's demographic data that are age, sex, Levels of Education, Marital Status, Residency, Patients Occupation, Monthly Income, Housing. Regarding the age, the results of the present study showed that the majority of subjects suffering from UC are within the youngest age between (18_36) years old ⁽¹²⁾. According to sex, the present study showed that the females are most common than males ^(13, 14).

In regards to the level of education that investigated in the current study, its result showed that the majority of study subjects diagnosed with UC those who graduated from college (22.9%). This result is compatible with ⁽¹⁵⁾. Moreover, the present

study investigated the patients' marital status, and show that the most of study subjects diagnosed with UC are married (60%). This result similar to the results of ⁽¹⁶⁾. Concerning the residency status. The results of the current study indicate that the highest percentage of study participants reside in urban areas (84.8%). This is similar to ⁽¹⁷⁾. Regarding the patients occupation. The results of the present study showed that the majority of subjects suffering from UC are unemployed (44.8%). This result agrees with ⁽¹⁸⁾ their findings were resemble to the current study.

Moreover as for the amount of monthly income. The present study showed that the amount of monthly income sufficient to some extent (55.2%) is the highest percentage among study subjects. These results are identical to ⁽¹⁹⁾. Regarding the housing, the results of the present study showed that the majority of subjects suffering from UC have own housing (84.8%). This result is similar to ⁽²⁰⁾.

The Patient's clinical characteristics that assessed in the present study included, disease duration, family history of UC, chronic disease, skin ulcers, eye ulcers, previous surgery, sleep disorder, adherence to UC medication, hospitals visits, healthy food, iron supplement, vitamin supplement, smoking, BMI.

The duration of ulcerative colitis is an important variable which effect on health related quality of life. The results of the current study showed the highest percentage of study subjects are diagnosed with UC for 1-5 years (62.9%) ⁽²¹⁾. their results indicated that the majority of study subjects diagnosed with UC \leq 5 years. Concerning family history of UC, the study subjects who investigated in the present study have no family history of (76.2%). This result agrees with ⁽²²⁾ their results indicated that the most of participants with no family history of ulcerative colitis. In regards to the chronic disease. The researcher in this study selected individuals who suffer from ulcerative colitis only and do not suffer from other chronic diseases. Therefore, the percentage of individuals is (100%) with no chronic diseases. This agrees with ⁽²³⁾, one of

inclusion criteria of their study was patients suffering from UC with no other chronic diseases. In related to skin ulcers, the highest percentage of current study subjects are with no skin ulcers (67.6%). This agrees with van der ⁽²⁴⁾.

Eye ulcers are also one of the complication that related to UC, the results of the present study demonstrated that the highest percentage of study participants are (67.6%) with no eye ulcers. This resemble to ⁽²⁵⁾. Concerning the previous surgery, the results of the present study displayed that the most of the study sample have not a previous surgery (86.7%). This result agrees with ⁽²⁶⁾. Regarding to sleep disorder, the results of the present study demonstrated that the highest percentage of participants in the current study suffered from sleep disorders (70.5%). This result is similar to ⁽²⁷⁾. In related to adherence to UC medication, the result of this study showed that the most percentage of study subjects are adherence to UC medication (53.6%). this result is resemble to ⁽²⁸⁾. Regarding the hospital visits, the highest percentage of study patients are those with one hospital visit every month (68.6%). This agree with ⁽²⁹⁾. According to the healthy food adherence, the results of the present study demonstrated that the most study subjects are those with no healthy foods adherence (56.2%). This result was similar to ⁽³⁰⁾. Regarding the iron supplement and vitamin supplement, the result reflects that the highest percentage of study participants are those have not iron supplement (75.2%), and those have not vitamin supplement (61%), this result supported by ⁽³¹⁾. Concerning the smoking, the current study results show the largest percentage of study subjects are non-smoking (86.7%), this agrees with ⁽³²⁾. Regarding the body mass index (BMI), the results of the present study displayed that the most of the study sample having those with normal BMI (54.3%). This result agrees with ⁽³³⁾.

According to the symptoms of ulcerative colitis, the results of present study showed that the patients suffering from anemia about (39%) of whole patients

(105), paller (46%), weight loss (38%), tired (97%), fever (39%), drought (29%), anorexia (48%), vomiting (22%), tenesmus (39%), abdominal pain (102%), and diarrhea (with mucus, pus, or blood) (59%) of all patients, so the majority of study participants suffering from abdominal pain, this agrees with ⁽³⁴⁾ they found that the highest percentage of participants suffering from abdominal pain.

The results of the study answered the research question that says, are there specific risk factors which strongly related to patients with UC, and the answers were yes, and these main risk factors were, age, gender, residency, marital status, sleep disorders, adherence to healthy food, and abdominal pain.

CONCLUSIONS:

The ulcerative colitis UC disease is most common in patients within the youngest age between (18_36) years old, most common among female than male, among patients reside in urban areas, the duration of ulcerative colitis is most common from 1_5 years, the symptoms of ulcerative colitis is most common symptom abdominal pain.

RECOMMENDATIONS:

We are highly recommended on assessing the most relevant clinical data for investigations the main risk factors that cause UC such as young age, female gender, people reside in urban areas, people with no family history of ulcerative colitis, people with sleep disorders, and those with no adherence to healthy food.

Limitation of study: Some patients refused to participate in filling out the questionnaire and the study results cannot be generalized.

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Conflicts of interest: The authors declare no conflict of interest.

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TABLES & Figures:

Table (1): Statistical distribution of participants according to their demographic data

Variables	Sub-groups	Patients group (Total = 105)	
		Freq.	%
Age / Years	18-36	56	53.3
	37-55	30	28.6
	56-74	19	18.1
Gender	Male	46	43.8
	Female	59	56.2
Levels of Education	illiterate	12	11.4
	Read and write	8	7.6
	Primary	13	12.4
	Intermediate	14	13.3
	Secondary	18	17.1
	Institute	15	14.3
	College	24	22.9
Marital Status	Postgraduate	1	1.0
	Single	27	25.7
	Married	63	60.0

	Widowed	13	12.4
	Divorced	2	1.9
Residency	Rural	16	15.2
	Urban	89	84.8
Patients Occupation	Employee	31	29.5
	Free Jobs	20	19.0
	Unemployed	47	44.8
	Retired	7	6.7
Monthly Income	Sufficient	22	21.0
	Sufficient to some extent	58	55.2
	Insufficient	25	23.8
Housing	Rent	16	15.2
	Own	89	84.8

Freq.= frequency, % = percentage.

Table (2): Statistical distribution of participants according to their medical health history

Variables	Sub-groups	Patients group (Total = 105)	
		Freq.	%
Disease Duration	1-5	66	62.9
	6-10	32	30.5
	11-15	7	6.7
Family History of UC	Yes	25	23.8
	No	80	76.2
Chronic Disease	Yes	0	0.0
	No	105	100.0
Skin Ulcers	Yes	34	32.4
	No	71	67.6
Eye Ulcers	Yes	34	32.4
	No	71	67.6
Previous Surgery	Yes	14	13.3
	No	91	86.7
Sleep Disorder	Yes	74	70.5
	No	31	29.5
Adherence to UC medication	Yes	56	53.3
	No	49	46.7
Hospitals Visits	1	72	68.6
	2	26	24.8
	3	7	6.7
Healthy Food	Yes	46	43.8
	No	59	56.2
Iron Supplement	Yes	26	24.8
	No	79	75.2
Vitamin Supplement	Yes	41	39.0
	No	64	61.0
Smoking	Yes	5	4.8
	No	91	86.7

	Former Smoker	9	8.6
BMI	Underweight	4	3.8
	Normal	57	54.3
	Overweight	28	26.7
	Obese	16	15.2

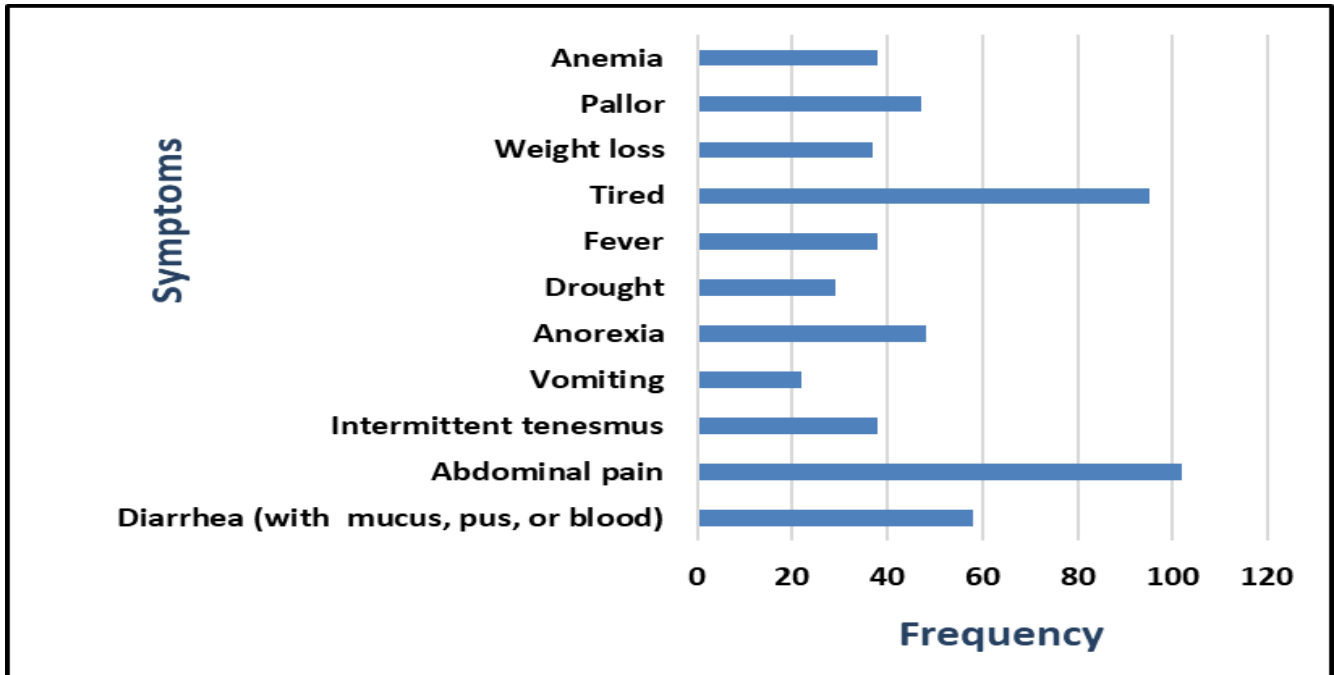


Figure (1): Statistical distribution of symptoms among patients