

Assessment of Bio-social Aspect with Cholelithiasis Patients in Baghdad City.

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الخلاصة:

الهدف: إيجاد العلاقة بين الصفات الديموغرافية والحالة الجسمية-الاجتماعية لمرضى حصى المرارة في مدينة بغداد. **المنهجية:** تم اختيار عينة غرضية (غير احتمالية) لـ 100 مريض، من عمر 20 سنة إلى 70 سنة ممن ادخلوا المستشفى قبل إجراء العملية الجراحية في كل من مستشفى الجراحة التخصصي لأمراض الجهاز الهضمي والكبد التعليمي، مستشفى بغداد التعليمي، مستشفى اليرموك التعليمي، ومستشفى الكرامة التعليمي للفترة من 25 حزيران 2004 حتى نهاية تشرين الأول 2004 وحسب مواصفات العينة، صممت استمارة استبائية لغرض الدراسة وتم تطبيق (الاختبار – وإعادة الاختبار) لثبات الاستمارة من خلال حساب معامل الارتباط (بيرسن). تم تحقيق محتوى الاستمارة من خلال مجموعة من الخبراء. وتم تحليل البيانات من خلال أسلوب الإحصاء الوصفي (التكرار، النسب المئوية) والأسلوب الإحصائي الاستنتاجي (معامل الارتباط ومربع كاي).

النتائج: أظهرت الدراسة إن معدل العمر 52.6 سنة، وإن أغلب العينة من النساء (ذا البشرة الشقراء)، متزوجة، ولود (لديها أطفال)، تعيش في المدينة، بدينة، لا تقرأ ولا تكتب، ذا الدخل الاقتصادي الضعيف. كذلك أثبتت نتائج الدراسة، وجود تأثير لمرضى حصى المرارة من الناحية الجسمية والاجتماعية.

التوصيات: أوصت الدراسة ضرورة إنشاء مركز تخصصي لجراحة الجهاز الهضمي والكبد في المحافظات، وتأليف كتيب يحمل في طياته العوامل المساعدة التي تسبب حدوث حصى المرارة، توعية المرضى الذين لديهم استعداد عائلي إيجابي لحصى المرارة تخص الأغذية والسوائل، ممارسة التمارين الرياضية، متابعة منتظمة تتضمن (أشعة سينية روتينية، فحص السونار، فحوصات مختبريه عامة)، استعمال الأدوية والآثار الجانبية الناجمة عنها.

Abstract:

Objective: To find out the relationship between the bio-social aspect with cholelithiasis patients and demographic characteristics in Baghdad city.

Methodology: A purposive (non-probability) sample of (100) patients, from (20-70) years old, who were selected from patients who were admitted to hospital at preoperative stage, from Gastroenterology and Hepatology Hospital, Baghdad Teaching Hospital, Al-Yarmook Teaching Hospital, Al-Karama Teaching Hospital, Teaching Hospital. A descriptive study was carried out from 25th of June 2004 to the end of October 2004.

An assessment form was constructed for the purpose of the study. Test-retest reliability was employed through computation of Pearson correlation coefficient. Content validity of the assessment form was determined through a panel of experts. Data were collected with interview technique.

Data were analyzed through descriptive statistical approach (frequency and percentage) and inferential statistical approach (chi-square and correlation coefficient).

Results: The study indicated that the mean of age was (52.6) year. The majority of them were females who fair; multiparty lived in urban, obesity, illiterate, low socio-economic status.

The result of the study confirmed that the bio-social aspect had an effect on the incidence of cholelithiasis.

Recommendations: The study recommended that the number of Gastroenterology and Hepatology Hospital should be increased in Iraq because; some of the patients come to Baghdad to treatment.

Patients with positive family history for cholelithiasis must be educated and informed about [diet and fluid, which are related to gallstones, exercise, Regular follow-up include, (routine X-ray, ultra-sound general laboratory investigations), drugs use and side effect].

Keywords: Cholelithiasis, Gallstones.

Introduction

Cholelithiasis is a solid crystal deposit that forms in the gallbladder ⁽¹⁾. Most clinical disorders of the extrahepatic biliary tract are related to gallstones ⁽²⁾. In the USA. (20%) of

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persons aged, (40) years, have gallstones and each year, (500,000) undergo cholecystectomy⁽³⁾.

Research interest during the last two decades has been focused on the metabolism of biliary lipids and its relationship to gallstone formation, It has become evident that a disturbed metabolism of cholesterol or bile salt constitutes a major factor in gallstone formation⁽⁴⁾.

A clinical picture emerges that relies on the five "F"s. The phrase "fair, female, fat, flatulent and fertile, forty" summarizes the major risk factors for the development of cholelithiasis⁽⁵⁾.

Gallstones may cause no symptoms at all, the most common complication is cramping pain usually felt in the upper right abdomen that radiates to the back or right shoulder, usually associated with nausea & vomiting, often occurs and fatty foods may trigger an attack⁽⁶⁾.

If the gallstone passes out of the gallbladder into the duct draining the liver, causes obstructive jaundice. There are two main types of gallstones; about (80%) are cholesterol stones, and the remainders that are called pigment stones⁽⁷⁾. The study aimed to find out the relationship between the Bio-social aspect with cholelithiasis patients and some of demographic characteristics.

Methodology

A descriptive study was using the assessment as an approach for the determination of the bio-social aspect with cholelithiasis disease. The study was carried out during the period of June 2004 to the end of October 2004. The setting of the study includes the following:

1. Gastroenterology and Hepatology Teaching Hospital.
2. Baghdad Teaching Hospital.
3. Al-Yarmook Teaching Hospital.
4. Al-Karama Teaching Hospital.

A purposive "non-probability" sample of (100) patients with cholelithiasis was selected out of the four teaching hospital in Baghdad City. The criteria, upon which the sample selection was employed. Included the following:-

1. Patients who were attending the hospital to treatment.
2. Patients who were definitely diagnosed as having cholelithiasis.
3. Patient's age ranged between 20-70 years old.
4. Interval period before the operation from (4-10) days.
5. Patients who agreed to participate in the study.

A questionnaire was designed and constructed by the researcher to measure the variables. The questionnaire consisted of (2) parts. Part I was demographic information sheet and part II was bio-social aspect. The data were collected through the utilization of constructed questionnaire, interview technique with the cholelithiasis patients who are admitted the hospital preoperatively stage. Interview took a timetable of (30) minute for each patient when he/she waited for result of the investigations. The assessment was conducted during the period of 25th June 2004 to the ends of October 2004. Data were analyzed through descriptive statistical approach (frequency and percentage) and inferential statistical approach (chi-square and correlation coefficient). Indicators were rated by 3 liker measure and scored as (<1.5) no mean score, (1.5-1.99) low mean score, (2-2.5) medium mean score, and (2.5-3) high mean score⁽¹¹⁾.

Results

Table (1): Distribution of age, gender, marital status, race, residential area, number of children and body mass index.

Items		Frequency	Percent
Age / year	20-29	6	6
	30-39	11	11
	40-49	30	30
	50-59	25	25
	60-69	15	15
	70-79	13	13
Total		100	100
Gender	Male	23	23
	Female	77	77
Total		100	100
Marital status	Married	78	78
	Single	7	7
	Widowed	15	15
Total		100	100
Race	Fruentaceous	17	17
	Fair	39	39
	Brunette	19	19
	White	25	25
Total		100	100
Residential area	Rural	26	26
	Urban	74	74
Total		100	100
Number of children	2-4	25	26.8
	5-7	36	38.7
	8-10	16	17.2
	11-13	15	16.2
Total		93	100
Body mass index	Under weight (0 –18.5)	5	5
	Normal weight (18.6–25)	20	20
	Over weight (25.1–30)	25	25
	Obese (30.1–40)	40	40
	Morbidity (40.1–70)	10	10
Total		100	100

Mean age = 52.6

This table shows that the distribution of age indicated that the majority of the groups were (40-49) years old who were accounted for (30%). Most of them were female (77%). It indicated that most of them were married accounted for (78%). It also indicated that most of them from fair accounted for (39%).

Most of them were urban area accounted for (74%), and the higher number of children for the groups was (5–7) children accounted for (36%).

The table shows that the distribution of body mass index, it indicated that the majority of them were (30.1-40 k/m²) obese accounted for (40%), it calculate by ideal body weight.

Table (2): Distribution of socio-economic status, use of contraceptive drugs and duration use of contraceptive drugs intake/ years.

Items		Frequency	Percent
Socio-economic status	High score (121–150).	20	20
	Middle score (90–120–).	23	23
	Low score (less than 89).	57	57
Total		100	100
Use of contraceptive drugs	Yes.	35	35
	No.	65	65
Total		100	100
Duration use of contraceptive drugs intake/ years	1-5	13	37.1
	6-10	10	28.5
	11-15	8	22.8
	16-20	4	11.4
Total		35	100

This table shows that the distribution of the socio-economic status the majority of the groups were low score were accounted (57%), it calculate by socio-economic status score.

The majority of the groups were not in use of contraceptive drugs were accounted (65%), and the duration of use contraceptive from (1-5) years accounted (13%) for the cases.

Table (3): Distribution of Family history and previous disease for cholelithiasis.

Items		Yes		No	
		Frequency	Percent	Frequency	Percent
Family history	Cholelithiasis.	37	22.56	63	26.69
	Diabetic Mellitus.	55	33.53	45	19.06
	Hypertension.	40	24.39	60	25.42
	Myocardial Infarction.	32	19.51	68	28.81
Total		164	100	236	100
Previous disease	Diabetic M. Disease.	17	8.05	83	14.09
	Hypertension.	37	17.53	63	10.69
	Atherosclerosis.	36	17.06	64	10.68
	Angina pectoris.	30	14.21	70	11.88
	Myocardial infraction.	24	11.37	76	12.90
	Pancreatitis.	10	4.73	90	15.28
	Cholecystitis.	35	16.58	65	11.03
Thyroid's disorder.	22	10.42	78	13.24	
Total		211	100	589	100

This table presents that the higher number of diabetic mellitus. was accounted (33.53%), for genetic susceptibility for cholelithiasis. The table also show that the previous disease for the patients who have hypertension were accounted (17.53%) for the groups.

Note: The answer is more than one for category.

Table (4): Mean of scores for items of the signs and symptoms, dietary pattern and social status.

Signs and Symptoms	No.	Items	3	2	1	M.S
			Always	Sometimes	Never	
	1-	Pain referred to the right shoulder and scapula	46	53	1	2.45
	2-	Pain occur after fatty meal intake.	41	55	4	2.37
	3-	Abdominal distention (flatulence).	87	7	6	2.81
	4-	Dyspepsia.	94	5	1	2.93
	5-	Nausea.	95	1	4	2.91
	6-	Vomiting.	82	10	8	2.74
	7-	Heartburn.	39	20	41	1.98
	8-	Jaundice.	85	11	4	2.81
	9-	Pain in right upper quadrant of abdomen.	21	0	79	1.42
Total			590	162	148	2.49
dietary pattern	1-	Having three irregular meals/a day.	48	11	41	2.07
	2-	Preferring big meals.	65	6	29	2.36
	3-	Having in hurry & without proper chewing.	21	6	73	1.48
	4-	Preferring rich fatty meal.	89	4	7	2.82
	5-	Preferring rich sweat.	55	19	26	2.29
	6-	Preferring egg.	63	16	21	2.42
	7-	Preferring a drinking tea.	90	7	3	2.87
	8-	Preferring to drinking coffee.	3	12	85	1.18
	9-	Preferring to drinking beverage. (Coca-Cola)	81	14	5	2.76
	10-	Preferring to drink water with meal.	78	5	17	2.61
	11-	Preferring frying foods.	91	4	5	2.86
	12-	Preferring a nutmeg chocolate.	46	13	41	2.05
	13-	Preferring milk & it products.	70	14	16	2.54
	14-	Preferring a cherry.	47	17	36	2.11
	15-	Preferring a rich vegetable oil foods.	98	2	0	2.98
	16-	Preferring having fiber's foods.	38	11	51	1.87
Total			983	161	456	2.32
social status	1-	Having relationship with my family & friends.	75	21	4	2.71
	2-	My relationship is limited with my family & relatives only.	53	38	9	2.44
	3-	Feeling that I cannot seek help from others when I experience social problem.	41	21	38	1.94
	4-	living in uncomfortable house.	48	30	22	2.26
	5-	Having no confidence about my profession.	34	26	40	1.94
	6-	My job can not provide financial resource to meet my family needs.	46	23	31	2.15
Total			297	159	144	2.23

This table indicated that the mean of scores for items of the signs and symptoms, it indicated that, highly mean of score on items (3,4,5,6,8), and the remaining items were medium mean of score on items (1, 2, 7), and no mean of score on items 9.

This table revealed that the mean of scores for items of the dietary pattern, is highly mean of score on items (4, 7, 9, 10, 11, 13, 15); and the remaining items were medium mean of score on items (1, 2, 5, 6, 12, 14 16); and no mean of score on items (3, 8).

This table indicated that the mean of scores for item of social status, it indicated that, highly mean of score on item (1); and the remaining items were medium mean of scores on items (2, 3, 4, 5, 6)⁽¹¹⁾.

Table (5): Pearson correlation between age, gender, marital status, race, number of children, signs and symptoms, body mass index, socio-economic status, family history, dietary attern, previous disease of hypertension, social status, use of contraceptive drugs, previous disease of cholelithiasis.

Variable		Age	Gender	Marital status	Race	Number of children	Signs and symptoms	Body mass index
Age.	Co.	1.000	.023	-.053	.036	.055	.237	-.092
	Sig.	C1	C2 .819	C3 .602	C4 .725	C5 .964	C6 .018	C7 .360
	N.	100	100	100	100	100	100	100
Socio-economic status	Co.	.218	-.134	-.184	-.051	.103	.159	-.109
	Sig.	C8 .02 9	C9 .183	C10 .067	C11 .614	C12 .310	C13 .114	C14 .282
	N.	100	100	100	100	100	100	100
Family history	Co.	-.117	-.074	-.009	-.273	.118	-.030	-.057
	Sig.	C15 .245	C16 .462	C17 .931	C18 .006	C19 .244	C20 .765	C21 .573
	N.	100	100	100	100	100	100	100
Dietary pattern	Co.	.014	.088	-.141	-.040	-.032	.229	.103
	Sig.	C22 .889	C23 .386	C24 .161	C25 .695	C26 .750	C27 .022	C28 .307
	N.	100	100	100	100	100	100	100
Previous disease of hypertension	Co.	-.129	-.127	.095	-.125	.161	.041	.016
	Sig.	C29 .202	C30 .220	C31 .348	C32 .214	C33 .109	C34 .685	C35 .876
	N.	100	100	100	100	100	100	100
Social status	Co.	-.116	-.134	.126	.132	.019	-.141	.008
	Sig.	C36 .252	C37 .183	C38 .213	C39 .191	C40 .850	C41 .161	C42 .934
	N.	100	100	100	100	100	100	100
Use of contraceptive drugs	Co.	.013	-.102	.027	-.076	-.005	.266	-.010
	Sig.	C43 .897	C44 .312	C45 .788	C46 .450	C47 .691	C48 .007	C49 .922
	N.	100	100	100	100	100	100	100
Previous disease of cholelithiasis	Co.	.097	-.151	.040	.022	-.006	.069	-.011
	Sig.	C50 .336	C51 .134	C52 .696	C53 .827	C54 .957	C55 .493	C56 .914
	N.	100	100	100	100	100	100	100

C = Cell , Co. = Correlation coefficient , Sig. = Significant (2- tailed) , N.= Number of sample.

This table shows that the relationship in the all of the cells except in cells (2, 3, 4, 5, 7, 11, 17, 20, 21, 22, 23, 25, 26, 31, 34, 35, 40, 42, 43, 45, 46, 47, 49, 50, 52, 53, 54, 55, and 56) that they had no relationship. (C2 It means relationship between age and gender, C25 It means relationship between dietary pattern and race ...etc.).

Discussion

The findings of the study, which revealed that, age range between (20-79) years old, & that the majority of age were (40-49) years who accounted for (30%), the mean of the age was (51.6) years (table 1).

This result was in agreement with those of another researches who had already found that the gallstones usually develop in adults between the ages of (20 - 50) years; about (20%) of

patients with gallstones are over 40 years ⁽⁸⁾. Other researches also supported this finding who noted that the gallstones usually develop in adults between the ages of (20 and 50) years about (20%) of patients with gallstones are over 40 years ⁽¹⁾.

A distinct relationship to gender, the majority of the study (77%) was females more than men's which are (23%). Another researcher studies that the gallstones, occur at the rate of (23%) for women and (10%) for men between the ages of 40 and 70 years old ⁽¹²⁾. Another researcher reported that the cholelithiasis is a common health problem in the United States, it is affected about (10%) of men and (15%) of women older than 55 years of age ⁽¹⁾.

Relative to their marital status, most of the (78%) were married, while the low percentage was single (7%). The risk of forming gallstones increases with pregnancy. This result was agreement with that of another researcher who had found that gallstones are more common in women; etiology may be due to the variations of estrogen causing increased cholesterol secretion and progesterone causing bile stasis ⁽⁶⁾. This finding was supported by the researcher who studied that, a fertile woman is referring to the fact that woman who are pregnant may be symptomatic, and women with multiple pregnancies are more likely to develop stones ⁽⁹⁾.

Another researcher noted that an increase in serum cholesterol and lipid levels in pregnancy, along with biliary stasis lead to a higher incidence of cholelithiasis ⁽³⁾.

A striking race relationship was also seeing in the study, the majority of the sample (39%) was fair-skinned patients (table 1). Other researcher found that the prevalence of gallstones is highest in fair-skinned people of northern European descent and in Hispanic populations, and it is very high in the Pima Indians (up to 75% in the elderly) and increased in other Native American groups. In addition, Asians with stones are more likely to have pigmented stones than other populations, nevertheless, the gallstones is low in African Americans; however, African Americans with sickle cell disease have gallstones early in life ⁽⁴⁾.

Regarding to residency, the most of the group was living at urban areas, (74%) for cases and (26%) were living at rural areas (table 1). Other researcher during his study noted that the pigment stones occur in rural more than urban ⁽¹⁰⁾. Other researcher shows that the gallstones are commonly found in urban areas more than were living at rural areas, because of the effect of the health perception-health management; sedentary lifestyle ⁽¹⁾.

The study indicated that the higher number of children for the groups was (36) child, which were ranged between (5-7) children for the cases, and the low number of children, were ranged "between" (11-13) children accounted (15) children.

This result was agreement with that of other researcher who found that the other factors influencing gallstones formation are multiple pregnancies ⁽¹⁾.

This finding was supported by the researcher who studied that, a women with multiple pregnancies are more likely to have gallstones ⁽⁴⁾. Regarding their body mass index indicated that the study findings had revealed that most of cases, which had experienced cholelithiasis, had developed over weight, obesity and they were morbidity obese relative to the cases.

The result depended on using body mass index (B.M.I.) criteria, which list ranges of desirable or healthy weight based on height. (40%) were obese, (25%) were over weight, (10%) were morbidity obese, and (5%) were under weight (table 1).

Other researcher finding that the factors that contribute to getting gallstones include obesity this is a major factor, especially in women ⁽¹⁾.

This finding was similar to those of other researcher who found that the advanced age and overweight impaired biliary lipid composition, increased the number of patients with cholesterol gallstones ⁽¹⁾.

Other researcher found that the human models of biliary sludge and gallstone disease are obesity and rapid weight-loss difasting; seem also to cause gallstone formation (~ 5 pounds/wk.) as result of very low calorie diets ⁽⁶⁾.

The majority of the groups were low score by the socio-economic status were accounted (57%) (table 2).

Obesity and weight dissatisfaction are associated mostly with disadvantageous health behaviours and low socio-economic status, health behaviour seems to be associated more with weight satisfaction than with actual weight ⁽⁸⁾.

Other researcher found that the health behaviour seems to be associated more with weight satisfaction than with actual weight ⁽²⁾.

Most of the majority of the groups were not in use of contraceptive drugs were accounted (65%), and the duration of use contraceptive drugs from (1-5) years accounted (13%) for the cases (table 2). Other researcher reported that the oral contraceptive drugs increase hepatic cholesterol uptake and synthesis, leading to excess biliary secretion of cholesterol ⁽¹⁰⁾.

Other researcher found that the early reports demonstrated an increased incidence of symptomatic gallstones in females on the oral contraceptive pill ⁽²⁾.

This finding was similar to those of other researcher who found that the serum total protein, globulin and cholesterol levels were significantly increase in oral contraceptive and their control counterparts ⁽¹²⁾.

The majority of the groups, who had family history of diabetes mellitus, accounted (33.35%), (table 3). Other researcher found that the diabetes mellitus is known as one of the predisposing factors, causing, and cholesterol gallstone. (Gallstone incidence is about 30% in diabetic patients over 20 years of age ⁽¹⁰⁾).

The majority of previous diseases for the cholelithiasis patients who have hypertension were accounted (17.35%) (table 3). Other researcher found that the small groups of patients with biliary pain may have symptoms due to hypertension, dysmotility ⁽³⁾.

Other researcher reported that the postmenopausal overweight and obesity leads to increased rates of cholesterol precipitate, hypertension, diabetes mellitus, coronary artery disease, and all cause mortality ⁽⁹⁾.

The mean scores of the signs and symptoms for the groups are highly significant on items, (3, 4, 5, 6, and 8) which are include abdominal distention (flatulence), dyspepsia, nausea, and jaundice.

In addition, the remaining items were significant on items (1, 2, and 7); which are include pain referred to the right shoulder and scapula, and pain occur after fatty meal intake.

The table indicated that the item (9), including the pain in right upper quadrant of abdomen, were no significant. (table 4).

These results agree with that of other researcher who noted that the symptoms of cholelithiasis include indigestion, pain, and tenderness in the right upper quadrant, which may be referred to the right shoulder and scapula⁽⁵⁾. Other researcher reported that the cholangitis is a serious condition and usually requires hospitalization; continued blockage of normal bile flow may produce jaundice⁽⁷⁾.

The mean scores of the dietary pattern for the groups are highly significant on items (4, 7, 9, 10, 11, 13, 15); which include preferring rich fatty meal, preferring a drinking tea, preferring to drinking beverage. (Coca-Cola), preferring to drink water with meal, preferring frying foods, preferring milk & its products, preferring a rich vegetable oil foods, and the remaining items were significant on item (1, 2, 5, 6, 12, 14, 16); which include having three irregular meals/a day, preferring big meals, preferring rich sweets, preferring egg, preferring a nutmeg chocolate, preferring a cherry, preferring having fiber's foods, and not significant on items (3, 8) which include having in hurry & without proper chewing, preferring to drinking coffee (table 4). Other researcher found that the high fat diet-historically, was associated with the formation of gallstones and symptoms associated with gallstones⁽⁷⁾. Other researcher reported that the foods should be avoided to reduce dietary fat are fried foods, fatty meats, and rich desserts these foods cause gastrointestinal discomfort⁽⁶⁾.

The mean scores of the social status for the groups are highly significant on item (1) including having relationship with my family & friends, and the remaining items were significant on items (2, 3, 4, 5, and 6) which include my relationship is limited with my family & relatives only, feeling that I cannot seek help from others when I experience social problem, living in uncomfortable house, having no confidence about my profession, my job can not provide financial resource to meet my family needs (table 4).

This result also was in agreement with that of other researcher who found that the other factors were seen to increase the occurrence of gallbladder stones are, a sedentary lifestyle⁽¹⁰⁾. Other researcher found that there are significant gender differences in social support, which are unfavorable for males and for female⁽⁶⁾.

Table (5) indicated that there was positive relationship between socio-economic status and age ($r = .218$, $p = 0.01$), number of children ($r = .103$, $p = 0.01$), signs and symptoms ($r = .159$, $p = 0.01$). Family history and number of children ($r = .118$, $p = 0.01$). Dietary pattern and signs and symptoms ($r = .229$, $p = 0.01$), body mass index ($r = .103$, $p = 0.01$). Previous disease of hypertensive and number of children ($r = .161$, $p = 0.01$). Social status and marital status ($r = .126$, $p = 0.01$), race ($r = .132$, $p = 0.01$). Use of contraceptive drugs and signs and symptoms ($r = .226$, $p = 0.01$).

Negative relationship between socio-economic status and gender ($r = -.134$, $p = 0.01$), marital status ($r = -.184$, $p = 0.01$), body mass index ($r = -.109$, $p = 0.01$). Family history and age ($r = -.117$, $p = 0.01$), race ($r = -.273$, $p = 0.01$). Dietary pattern and marital status ($r = -.141$, $p = 0.01$). Previous disease of hypertensive and age ($r = -.129$, $p = 0.01$), gender ($r = -$

.127, $p = 0.01$), race ($r = -.125$, $p = 0.01$), Social status and age ($r = -.116$, $p = 0.01$), gender ($r = .134$, $p = 0.01$), signs and symptoms ($r = .141$, $p = 0.01$), Use of contraceptive drugs and gender ($r = -.102$, $p = 0.01$). Previous disease of cholelithiasis and gender ($r = -.151$, $p = 0.01$).

No relationship between age and gender ($r = .023$, $p = 0.01$), marital status ($r = -.053$, $p = 0.01$), race ($r = .036$, $p = 0.01$), number of children ($r = .055$, $p = 0.01$), body mass index ($r = -.092$, $p = 0.01$). Socio-economic status and race ($r = -.051$, $p = 0.01$). Family and gender ($r = -.074$, $p = 0.01$), marital status ($r = -.099$, $p = 0.01$), signs and symptoms ($r = -.030$, $p = 0.01$), body mass index ($r = -.057$, $p = 0.01$). Dietary pattern and age ($r = .014$, $p = 0.01$), gender ($r = .088$, $p = 0.01$), race ($r = -.040$, $p = 0.01$), number of children ($r = -.032$, $p = 0.01$). Previous disease of hypertensive and age ($r = .095$, $p = 0.01$), signs and symptoms ($r = .041$, $p = 0.01$), body mass index ($r = .061$, $p = 0.01$). Social status and of children ($r = -.019$, $p = 0.01$), body mass index ($r = .008$, $p = 0.01$). Use of contraceptive drugs and age ($r = .013$, $p = 0.01$), marital status ($r = .027$, $p = 0.01$), race ($r = -.076$, $p = 0.01$), number of children ($r = -.005$, $p = 0.01$), body mass index ($r = -.010$, $p = 0.01$). Previous disease of cholelithiasis and age ($r = .097$, $p = 0.01$), marital status ($r = .040$, $p = 0.01$), race ($r = .022$, $p = 0.01$), number of children ($r = -.006$, $p = 0.01$), signs and symptoms ($r = .069$, $p = 0.01$), body mass index ($r = -.011$, $p = 0.01$).

This finding was supported with some literature, such as other researcher who reported that was relationship between cholelithiasis and demographic characteristics such as age, marital status, race, use contraceptive pills, family history, social economic class, body mass index, previous disease of hypertension and cholelithiasis⁽⁸⁾.

This result also was in agreement with that of other researcher who found that the risk factors for gallstone formation (age, gender, family history, parity, obesity, diabetes mellitus, hyperlipoproteinemia) and the characteristics of liver cirrhosis (etiology, duration, child class, hypersplenism), gallstones (duration, number, size), and gallbladder (size, wall thickness), were assessed in all patients⁽⁵⁾.

Other researcher reported that the prevalence of gallstone disease was significantly higher in women than in men and increased with age, ethnic and geographic, Social factors include behavior of parents, siblings, peers and significant adults, but also family characteristics, social support, and socio-economic status⁽¹²⁾.

This result agreed with that of other researcher who found that any condition in which gallbladder motility is reduced predisposes to gallstones, estrogenic influences, including oral contraceptive and pregnancy which leads to increase hepatic cholesterol uptake and synthesis, and other cardiovascular risk factors leading to excess biliary secretions of cholesterol⁽⁷⁾.

Other researcher during his study noted that the relative risk of gallstones mentioned associated with an increase with adjusted for sex, age, body weight, ethnicity, contraceptive pills, hypercholesterol and other major cardiovascular risk factors was 0.6 (95% confidence

interval, 0.5-0.8). For the bio-chemical function of the liver, the results were identical, when studying develop cholelithiasis the inverse relationship becomes somewhat stronger.

The present study confirms the existence of an inverse association between variation and incidence of cholelithiasis ⁽⁶⁾.

Recommendations

Based on the previously listed conclusions, the researcher recommends that:

- 1- Every patient with cholelithiasis must have a guide notebook about the predisposing factors of cholelithiasis.
- 3- Special session in TV (awareness program) by health consultants emphasize on the risk factors of suddenly reduction or overweight.
- 2- All the clients with positive family history for cholelithiasis must be educated and informed about:
 - A. The nature of diets and fluids.
 - B. Exercise
 - C. Regular follow-up include, (routine X-ray, ultra-sound investigations).
 - D. A drugs use and side effect.

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