PREVALENCE AND RISK FACTORS OF FATTY LIVER DISEASE ASSESSED BY FIBROSCAN IN OUTPATIENTS: A CROSS-SECTIONAL STUDY FROM DUHOK, IRAQ

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ABSTRACT

Background: Cirrhosis is a leading cause of morbidity and mortality among individuals with chronic liver disease. This study aimed to determine the prevalence of fatty liver, associated risk factors, and cirrhosis in patients attending a private outpatient clinic.

Methods: This prospective cross-sectional study enrolled 195 patients from an outpatient clinic in Duhok City. Eligible participants underwent liver fibrosis assessment using the FibroScan® device for evaluating hepatic fibrosis.

Results: The study sample had a mean age of 45.23 years (SD = 15.1) and included 48.7% young adults, 36.9% middle-aged individuals, and 14.4% elderly participants; 54.4% were male. Key risk factors included smoking (51.8%), diabetes (12.3%), hypertension (5.6%), and hepatitis B virus (HBV) infection (4.6%). Steatosis was absent in 5.13% of cases, while 94.87% exhibited some degree of steatosis: mild (6.15%), moderate (12.82%), or severe (75.9%). Moderate fibrosis was the most common form, followed by severe fibrosis (9%). The prevalence of cirrhosis among outpatients was 8%. Overall, the prevalence of non-alcoholic fatty liver disease (NAFLD) was 39%. Cirrhosis was significantly more prevalent in elderly patients compared to middle-aged and young individuals: 64.29% (OR: 6.75; 95% CI: 2.70–16.89) and 52.78% (OR: 4.19; 95% CI: 2.13–8.24), respectively, versus 21.05% in the young group ($p < 0.0001$). Diabetic patients also had a higher prevalence of cirrhosis compared to non-diabetics (58.33% vs. 36.26%; OR: 5.46; 95% CI: 1.03–5.87).

Conclusions: The prevalence of cirrhosis and NAFLD in outpatients was high and was related to older age and hypertension.

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Keywords: fatty liver, risk factors, fibrosis

Cirrhosis represents a significant source of mortality and morbidity for individuals with chronic liver disease[1]. In 2019, cirrhosis was responsible for 2.4% of global deaths, establishing it as one of the leading causes of mortality worldwide[2]. A study determined the prevalence of MASLD (formerly NAFLD) in the general population and among type 2 diabetes mellitus (T2DM) patients in the Middle East and North Africa (MENA) region through a systematic review and meta-regression analysis of studies from 1990 to 2023. They estimated the prevalence of NAFLD/MASLD was 9.43% in the general population and significantly higher—68.71%—among individuals with T2DM. The prevalence has risen over time, increasing from 35.42% between 2008–2016 to 46.20% between 2017 and 2020. Analysis of the Global Burden of Disease (GBD) 2019 data projected approximately 141.51 million NAFLD/MASLD cases in MENA region. Additionally, an estimated 24.96 million people in the region live with both NAFLD/MASLD and T2DM, highlighting a growing metabolic and hepatic health challenge[3].

Cirrhosis can result in hepatocellular cancer and hepatic decompensation, which includes variceal hemorrhage, hepatic encephalopathy, and ascites[1,4]. The main

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contributors to cirrhosis are nonalcoholic fatty liver disease (NAFLD), alcohol-related liver disease, and infections caused by the hepatitis B and C viruses[5,6]. Chronic liver disease patients may develop liver cirrhosis and accompanying consequences, including hepatocellular carcinoma, ascites, variceal hemorrhage, and liver failure[7] Hepatocyte inflammation that persists over time and leads to hepatic fibrosis, architectural distortion, and nodule development is referred to as chronic liver disease. Viral hepatitis, alcohol, and NAFLD account for the majority of cases[8]. NAFLD, driven significantly by the increasing rates of obesity and metabolic syndrome, is one of the main causes of chronic liver disease across the world. Viral hepatitis, particularly hepatitis B (HBV) and hepatitis C (HCV), remains a critical contributor to liver disease, especially in areas with high levels of endemic infection. Furthermore, alcohol-related liver disease persists as a significant cause of liver disease, fueled by the prevalence of excessive alcohol consumption globally[9] Several methods are used to detect inflammation of the hepatocytes and fibrosis. One of which is FibroScan, also known as Transient Elastography, a modern, non-invasive, rapid bedside test used for the evaluation of the degree or severity of liver fibrosis through the measurement of liver stiffness[7,10] A FibroScan is a device used for the assessment of liver fibrosis. Limitations include: ascites, morbid obesity, and/or large chest wall fat[11]. By providing a non-invasive alternative to liver biopsy, FibroScan offers a safer and more comfortable option for patients, allowing for repeated assessments to monitor disease progression and treatment response[10]. Therefore, this study aimed to identify the prevalence of fatty liver, its risk factors, and cirrhosis in outpatient clinics through a FibroScan in a single-center study.

Patients

Study design

This prospective cross-sectional study enrolled patients who attended the outpatient clinic of the clinician (author) who met predefined eligibility criteria. Eligible patients underwent fibrosis assessment using the FibroScan® device, a non-invasive tool for evaluating liver fibrosis. Fibrosis scores, along with demographic and medical characteristics, were recorded in a pre-designed questionnaire.

Patients were recruited from a single center in Duhok City, Kurdistan Region of Iraq, over six months between October 2024 and March 2025. Due to limited access to other medical facilities, the study extended its recruitment period to maximize participant inclusion. Notably, the study center serves a diverse population from various areas of Duhok Governorate, ensuring the representation of patients with differing demographic and clinical profiles.

Sampling technique

Patients visiting the outpatient clinic were consecutively screened for eligibility. A convenience sampling method was used to enroll participants, primarily due to logistical constraints and the study setting in a private clinic, where access to a broader patient population was limited. While efforts were made to include as many eligible patients as possible, the sample size was not determined a priori. The use of convenience sampling may limit the representativeness of the sample and generalizability of the findings to the wider population, as it increases the risk of selection bias.

Data collection

Demographic profile information was collected from the patients through the self-reported technique, including age, sex, and other relevant demographic details, including alcohol consumption. The “Shear wave Quantification Ultrasound Diagnostic System” from the “HiSky” company (SN/ FT-100-0016-011) was used to assess the liver fibrosis in this study. The assessment was performed by the author for all

patients. Cirrhosis scores were assessed as F0 to F1 (determined as normal liver), F2 (determined as moderate scarring), F3 (determined as severe scarring), or F4 (called cirrhosis) for non-alcoholic fatty liver disease[12]. To avoid the measurement bias, all scans were screened and evaluated by one person (the author) only.

Virology measurements

The lab obtained blood samples, which were then examined for the following diseases

- Hepatitis B (HBV): the enzyme-linked immunosorbent test (ELISA) was used to detect HBsAg.
- Hepatitis C (HCV): ELISA was used to detect anti-HCV antibodies.

Statistical analysis

The patients' medical and general data were summed up as mean (standard deviation) for age and as numbers and percentages (categorical variables). The Pearson chi-squared test was used to examine correlations between fibrosis scores and patient attributes. P-values below 0.05 were identified as a statistically significant difference between the two sub-groups. The magnitude of the association was determined in OR (Odds Ratio) and uncertainty with a 95% confidence interval. JMP® software (Version 18.0, SAS Institute Inc., Cary, NC, 1989–2023) was used for all analyses.

Ethical approval

The ethical approval of the study protocol was received from the Duhok General Directorate of Health's Local Health Ethics Committee (Reference No. 08012025-1-25, dated January 8, 2025). In compliance with ethical guidelines, patient confidentiality was safeguarded by anonymizing personal data. All required permissions were obtained from relevant institutional authorities before data collection.

RESULTS

The mean age of the patients was 45.23 years (SD = 15.1). The largest proportion of participants were young adults (48.7%), followed by middle-aged individuals (36.9%) and elderly individuals (14.4%). Males accounted for 54.4% of the sample, while females comprised 45.6%. Regarding risk factors, 2.05% of participants reported a history of alcoholism, 51.8% were smokers, and 4.6% had a positive virology profile (4.1% hepatitis B virus-positive and 0.51% hepatitis C virus-positive). Additionally, 12.3% had diabetes, and 5.6% had hypertension. Of the examined sample, 5.13% showed no steatosis, while 94.9% exhibited some degree of steatosis: 6.15% had mild steatosis, 12.82% had moderate steatosis, and the majority (75.9%) had severe steatosis. The prevalence of Fibrosis among the examined sample was non-fibrotic F0, F1 (61.03%), moderate scarring (21.54%), severe scarring (9.23%), and cirrhosis (8.21%; Table 1).

Table 1: General and medical characteristics of outpatient patients

Characteristics (n=195)		All patients no. (%)	Gender no (%)		
			Female 89 (45.64%)	Male 106 (54.36%)	p
Age	Young	95 (48.72)	36 (40.45)	59 (55.66)	0.0189
	Middle	72 (36.92)	34 (38.20)	38 (35.85)	
	Elderly	28 (14.36)	19 (21.35)	9 (8.49)	
Waist circumference	Normal	124 (63.59)	54 (60.67)	70 (66.04)	0.4361
	Risky	9 (4.62)	3 (3.37)	6 (5.66)	
	High Risk	62 (31.79)	32 (35.96)	30 (28.30	
Smoking	No	94 (48.21)	85 (95.51)	9 (8.49)	<0.0001
	Yes	101 (51.79)	4 (4.49)	97 (91.51)	
Alcohol	None	191 (97.95)	89 (100)	102 (96.23)	0.1269
	Yes	4 (2.05)	0 (0.00)	4 (3.77)	
Virology outcomes	None	186 (95.38)	86 (96.63)	100 (94.34)	0.5828
	HBV	8 (4.10)	3 (3.37)	5 (4.72)	
	HCV	1 (0.51)	0 (0.00)	1 (0.94)	

Characteristics (n=195)		All patients no. (%)	Gender no (%)		
			Female 89 (45.64%)	Male 106 (54.36%)	p
Diabetes	No	171 (87.69)	76 (85.39)	95 (89.62)	0.3705
	Yes	24 (12.31)	13 (14.61)	11 (10.38)	
Hypertension	No	184 (94.36)	82 (92.13)	102 (96.23)	0.2332
	Yes	11 (5.64)	7 (7.87)	4 (3.77)	
Fibroscan findings/fibrosis score	F0 (Normal)	81 (41.54)	34 (38.20)	47 (44.34)	0.5086
	F1 (Normal)	38 (19.49)	20 (22.47)	18 (16.98)	
	F2 (Moderate scarring)	42 (21.54)	20 (22.47)	22 (20.75)	
	F3 (Severe scarring)	18 (9.23)	10 (11.24)	8 (7.55)	
	F4 (Cirrhosis)	16 (8.21)	5 (5.62)	11 (10.38)	
Fibroscan findings/steatosis score	None	10 (5.13)	6 (6.74)	4 (3.77)	0.3422
	Mild	12 (6.15)	8 (8.99)	4 (3.77)	
	Moderate	25 (12.82)	11 (12.36)	14 (13.21)	
	Severe	148 (75.90)	64 (71.91)	84 (79.25)	

The Pearson chi-squared test was performed for statistical analyses.

The study found that moderate scarring was the most prevalent form of fibrosis among outpatients, followed by severe scarring (9%). The prevalence of cirrhosis among outpatients was 8% in this study. Overall, the prevalence of NAFLD among outpatients was 39% in this study (Fig. 1).

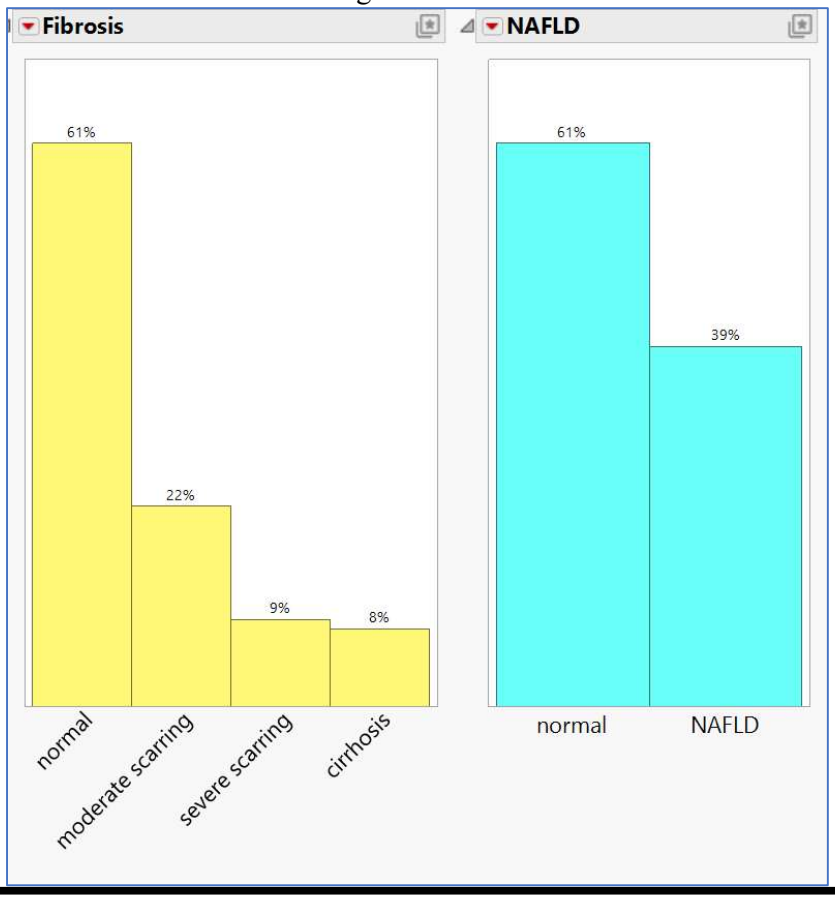

Fig 1: Prevalence of fibrosis and NAFLD in outpatients

The study showed that middle-aged patients were more likely to have moderate scarring (39.29%) and elderly patients were more likely to have severe scarring (37.50%) and cirrhosis (37.50%). In addition, the patients with normal waist circumference were more likely to have cirrhosis (18.75%) compared to patients with risky (0.0%) and high-risk (2.08%) waist circumference. Moreover, the patients with hypertension were more likely to have severe scarring (42.86%) and cirrhosis (42.86%; Table 2).

Table 2: Association of moderate, severe, and cirrhosis fibrosis with general and medical characteristics compared to normal patients in outpatients

Characteristics (n=195)	Fibrosis no (%)			
	Normal	moderate scarring	Severe scarring	Cirrhosis
Age				
Young	75	14 (15.73)	4 (5.06)	2 (2.60
Middle	34	22 (39.29)	8 (19.05)	8 (19.05
Elderly	10	6 (37.50)	6 (37.50)	6 (37.50
p		0.0039	0.0009	<0.0001
Sex	65			
Male	54	22 (25.29)	8 (10.96)	11 (14.47
Female		20 (27.03)	10 (15.63)	5 (8.47
p		0.8022	0.4199	0.4216
Waist circumference				
Normal				
Risky	65	32 (32.99)	12 (15.58)	15 (18.75
High Risk	7	1 (12.50)	1 (12.50)	0 (0.00
p	47	9 (16.07)	5 (9.62)	1 (2.08
		0.0479	0.6151	0.0113
Smoking				
No	60	19 (24.05)	10 (14.29)	5 (7.69
Yes	59	23 (28.05)	8 (11.94)	11 (15.71
p		0.5636	0.6846	0.1872
Alcohol				
None	117	41 (25.95)	18 (13.33)	15 (11.36
Yes	2	1 (33.33)	0 (0.00)	1 (33.33
p		1.000	1.000	0.3172
Virology				
HBV	5	3 (37.50)	0 (0.0)	0 (0.00
HCV	0	1 (100)	0 (0.00)	0 (0.0)
None	114	38 (25.00)	18 (13.64)	16 (12.31
p		0.1767	1.000	0.4034
Diabetes				
No	109	39 (26.35)	11 (9.17)	12 (9.92
Yes	10	3 (23.08)	7 (41.18)	4 (28.57
p		1.000	0.0003	0.0637
Hypertension				
No	115	41 (26.28)	15 (11.54)	13 (10.16
Yes	4	1 (20.00)	3 (42.86)	3 (42.86
p		1.000	0.0480	0.0360

The Pearson chi-squared test was performed for statistical analyses.

The study showed that NAFLD is related to older age ($p<0.0001$) and diabetes ($p=0.0378$). The prevalence of NAFLD was not associated with other factors (Table 3).

Table 3: Associated factors with NAFLD among outpatients

Characteristics (n=195)	NAFLD no (%)		OR (95% CI)	p
	normal	NAFLD		
Age				
Young	75 (78.95)	20 (21.05)	Ref	<0.0001
Middle	34 (47.22)	38 (52.78)	4.19 (2.13-8.24)	
Elderly	10 (35.71)	18 (64.29)	6.75 (2.7-16.89)	
Sex				
Male	65 (61.32)	41 (38.68)	Ref	0.9265
Female	54 (60.67)	35 (39.33)	1.03 (0.58-1.83)	
waist circumference				
Normal	65 (52.42)	59 (47.58)	Ref	0.0049
Risky	7 (77.78)	2 (22.22)	0.31 (0.06-1.58)	
High Risk	47 (75.81)	15 (24.19)	0.35 (0.18-0.69)	
Smoking				
No	60 (63.83)	34 (36.17)	Ref	0.4386
Yes	59 (58.42)	42 (41.58)	1.26 (0.71-2.24)	
Alcohol				
None	117 (61.26)	74 (38.74)	Ref	0.6437
Yes	2 (50.00)	2 (50.00)	1.58 (0.22-11.47)	
Virology				
HBV	5 (62.50)	3 (37.50)	0.95 (0.22-4.1)	0.4542
HCV	0 (0.00)	1 (100)	1.57 (0.1-25.49)	
None	114 (61.29)	72 (38.71)	Ref	
Diabetes				
No	109 (63.74)	62 (36.26)	Ref	0.0378
Yes	10 (41.67)	14 (58.33)	5.46 (1.03-5.87)	
Hypertension				
No	115 (62.50)	69 (37.50)	Ref	0.1125
Yes	4 (36.36)	7 (63.64)	2.92 (0.82-10.33)	

Pearson chi-squared test was performed for statistical analyses.

DISCUSSION

This study included mostly young adults, followed by middle-aged individuals, and elderly participants. Key risk factors included smoking, diabetes, hypertension, and viral infections. The prevalence of NAFLD and cirrhosis was high in this study and was associated with age and hypertension.

In several parts of the world, NAFLD is now acknowledged as the leading cause of chronic liver disease[13]. However, according to Vos, et al.[14], the WHO does not officially acknowledge NAFLD as a significant noncommunicable disease. According to the most recent meta-analysis, at least 30% of adults worldwide have NAFLD (1990–2019 period). However, the prevalence of NAFLD disease was projected to be as high as 38% when only data from 2016 to 2019 were taken into account[15]. Our region's NAFLD prevalence is very comparable to the worldwide average.

The combined prevalence of NAFLD for all ages has therefore steadily increased from 10.5% in 1990 to 16.0% in 2019, according to the new data[14]. According to Estes, et al.[16], the prevalence of NAFLD disease in adults was found to be 23.4% worldwide, rising by around 1.00% (95% CI: 0.97%–1.02%) every year. The Middle East and North Africa have the highest frequency of NAFLD (26.5%). NAFLD liver mortality rates (per 100,000) have also grown yearly by 0.77% (95% CI: 1.75–2.18) in addition to the rising prevalence. Central Latin America has the highest all-age NAFLD liver fatalities (5.90 deaths per 100,000 individuals)[17]. According to different research, the Middle East is the region with the greatest prevalence of NAFLD among all liver illnesses worldwide. Egypt,

Kuwait, Qatar, Bahrain, the United Arab Emirates, Saudi Arabia, Iran, Jordan, Tunisia, and Libya were among the top 10 nations with the highest prevalence of NAFLD[18].

Furthermore, a hierarchy of disease risk factors developed by the GBD indicates to all stakeholders where progress is being made and where further interventions are needed to advance. Level 1 risk factors include the following behavioral factors. The behavioral factors are smoking, alcohol, drug use, etc., along with occupational (such as exposure to toxic chemicals, injuries, etc.), and metabolic factors (such as high low-density lipoprotein cholesterol levels, high fasting plasma glucose level, and high systolic blood pressure)[14]. levels

Based on a 2016 meta-analysis that employed age stratification, the prevalence of NAFLD worldwide was 28.9% in those aged 60–69% and 34.0% in people aged 70–79[19]. According to studies including older and elderly people, the incidence increased with age and decreased as people aged. NAFLD prevalence in the 75–79, 80–84, and >85 age groups was 39.6%, 32.1%, and 21.1%, respectively, according to Rotterdam research[19]. Liver function, hepatic volume, and hepatic blood flow all decrease by up to 25% between 20 and 70 years[20]. The pharmacokinetic profiles of medications that undergo obligatory hepatic oxidation tend to change as a result of reduced liver volume and hepatic blood flow in the elderly; however, the exact effects are unknown[21].

A review study comprised data from 11 cohort studies with an average follow-up of 5.7 years and 390348 participants (52% male). Overall, NAFLD was associated with a slightly higher incidence of incident hypertension (HR: 1.66; 95% CI; P<0.001). Sensitivity tests revealed that estimates were unaffected by the follow-up period, geographic location, or correction for baseline blood pressure readings. However, the observed variability was partially explained by the fact that the size of the connection was smaller in studies that controlled for baseline adiposity than in those that did not. According to this extensive meta-analysis, there is a ~1.6-fold higher chance of having hypertension if you have NAFLD[22]. The impact of NAFLD severity on incident hypertension in terms of inflammation and fibrosis requires further research[22].

A person with diabetes has a higher risk of developing more severe NAFLD, which is linked to consequences including cirrhosis and death. Diabetics had a higher standardized mortality ratio from cirrhosis (2.52) in one large cohort of research[23]. Additionally, it was discovered that co-occurring type 2 diabetes was an independent risk factor for fibrosis in a group of 432 individuals with biopsy-proven NAFLD[24]. Although the pathophysiology of NAFLD is linked to insulin resistance in the liver and extra-hepatic tissues like skeletal muscle and adipose tissue, there is new evidence of hepatic steatosis that can occur without insulin resistance, especially in people who have single nucleotide polymorphisms in the PNPLA3 gene, which codes for the enzyme patatin-like phospholipase 3 [25]. Triacylglycerol (TAG) builds up in the liver from three sources: food accounts for 14%, de novo lipogenesis (DNL) for 26%, and circulating free fatty acids (FFAs) for 59%[26].

Our results indicate a prevalence of NAFLD of 39% in our cohort, which is higher than the estimated global adult prevalence of approximately 25% and the reported 25% incidence in the Iraqi adult population in metropolitan areas[27]. This suggests a significant burden of NAFLD within your study group.

The progression observed in our patients, from mild (6.15%), moderate (12.82%), to severe steatosis (75.9%), and the presence of moderate to severe fibrosis (9%) and cirrhosis (8%), aligns with the recognized natural history of NAFLD. This disease can

advance from simple steatosis to non-alcoholic steatohepatitis (NASH), then to fibrosis, cirrhosis, and ultimately hepatocellular carcinoma[27,28].

The identified risk factors in our study, including smoking (51.8%), diabetes (12.3%), and hypertension (5.6%), are largely consistent with the sources. Diabetes, obesity, hypertension, and dyslipidemia are widely recognized as major contributors to NAFLD and its progression.27 While our data shows a high prevalence of smoking, some studies from the sources report no statistically significant relationship between smoking and NAFLD, whereas others present contradictory findings[27].

A particularly important finding is the significantly higher prevalence of cirrhosis in elderly patients (64.29%) compared to middle-aged and young individuals. This supports the understanding that age plays a crucial role in NAFLD progression, with older age groups often experiencing a higher prevalence and more advanced stages of the disease[27,29]. Similarly, the increased prevalence of cirrhosis in diabetic patients (58.33%) underscores the strong pathogenic link between NAFLD, insulin resistance, and type 2 diabetes mellitus[28]. These findings highlight the critical need for early intervention and targeted public health strategies, including lifestyle changes and improved healthcare access, to manage NAFLD and prevent its progression to more serious liver disorders in the Iraqi population.

The main strength of this study was our effort to extend the study period to include as many patients as possible from diverse socio-demographic backgrounds. However, the findings reported in this study may not be generalizable to other settings across the rest of the country, as we only included patients from a single center.

CONCLUSIONS

This study identified a 39% prevalence of NAFLD in Duhok City. The prevalence of NAFLD in this region was associated with having previous hypertension and diabetes, and being older in outpatients.

Ethical Approval and Consent to participate: We received from the Duhok General Directorate of Health's Local Health Ethics Committee (Reference No. 08012025-1-25, dated January 8, 2025). In compliance with ethical guidelines, patient confidentiality was safeguarded by anonymizing personal data. All required permissions were obtained from relevant institutional authorities before data collection. We received from the Duhok General Directorate of Health's Local Health Ethics Committee (Reference No. 08012025-1-25, dated January 8, 2025).

Consent for publication: We obtained the permission for the publication from the ethical committee.

Availability of supporting data: The raw file of the data is available to everyone.

Competing interests: There are no conflicts of interest.

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Authors' contributions: The study has one author. The author did all parts of the study except for the statistical calculations.

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پوختە

بڵاوبوونەوە و هۆکارەکانی مەترسی نەخۆشی جەگری چەوری هەڵسەنگێندراو بە ئامێری فایبروسکان لە نەخۆشانی دەرەوەی نەخۆشخانە: توێژینەوەیەکی بڕگەیی لە دهۆک، عێراق

پێشەکی و ئارمانج: نەخۆشی سیرۆزیس هۆکاری سەرەکی نەخۆشی و مردنە لەو کەسانەی کە نەخۆشی درێژخایەنی جگەریان هەیە. لە توێژینەوەیەکی تاکە سەنتەریدا، ئەم توێژینەوەیە بڵاوبوونەوەی جگەری چەوری، هۆکارەکانی مەترسی و نەخۆشی سیرۆزی لە کلینیکەکانی دەرەوەی نەخۆشخانەدا دەستنیشانکرد.

ڕێکێن قەکولینێ: ئەم توێژینەوەیە بڕبڕییە ئایندەییە 195 نەخۆشی کلینیکی دەرەوەی نەخۆشخانەی وەرگرت کە پێوەرە پێشوەختە دیاریکراوەکانی شایستەییان بەدیهێنابوو. نەخۆشە شایستەکان هەڵسەنگاندنی ڕیشاڵییان بۆ کرا بە بەکارهێنانی ئامێریFibroScan® ، ئامرازێکی ناداگیرکەر بۆ هەڵسەنگاندنی ڕیشاڵی جگەر.

ئەنجام: نمونەی توێژینەوەکە) تێکڕای تەمەن: 45.23 ساڵ، 48.7% (SD = 15.1گەنجانی پێگەیشتوو، 36.9% کەسانی تەمەن ناوەڕاست، 14.4% بەشداربووانی بەساڵاچوو، و نێر (54.4%) لەخۆگرتبوو. هۆکارە سەرەکییەکانی مەترسی بریتی بوون لە جگەرەکێشان (51.8%)، شەکرە (12.3%)، بەرزی فشاری خوێن (5.6%)، و هەبوونی HBV (4.6%).چەوری لە 5.13% حاڵەتەکاندا نەبووە، لەکاتێکدا 94.9% هەندێک پلەیان نیشانداوە: سووک (6.15%)، مامناوەند (12.82%)، یان توند (75.9%). پلەی مامناوەند باوترین جۆری ڕیشاڵی بوو، دواتر پلەی توند (9%). ڕێژەی بڵاوبوونەوەی نەخۆشی سیرۆزیس لە نێوان نەخۆشانی دەرەوەی نەخۆشخانەدا لەم توێژینەوەیەدا 8% بووە. بە گشتی، بڵاوبوونەوەی NAFLD لە نێوان نەخۆشانی دەرەوەی نەخۆشخانەدا 39% بوو لەم لێکۆڵینەوەیەدا. نمرەکانی سیرۆزیس لە نەخۆشە بەساڵاچووەکاندا بە بەراورد لەگەڵ کەسانی تەمەن ناوەڕاست و گەنج بە شێوەیەکی بەرچاو بەرزتر بوون (21.43%) بەرامبەر 11.11% و 2.11%؛ .(p < 0.0001 هەروەها نەخۆشانی شەکرە ڕێژەی تووشبوونیان بە نەخۆشی سیرۆزی زیاتر نیشان دا لە چاو ئەوانەی کە شەکرە نین (16.67%) بەرامبەر 7.02%؛(p = 0.0020 ، هەروەها نەخۆشانی بەرزی فشاری خوێن بە بەراورد لەگەڵ نەخۆشانی بەرزی فشاری خوێن نەبوو (27.27%) بەرامبەر 7.07%؛.(p = 0.0201

دەرئەنجام: ئەم توێژینەوەیە ڕێژەی بەرزی نەخۆشی سیرۆزیس و NAFLD لە کلینیکی دەرەوەی نەخۆشخانەدا نیشان دا و پەیوەندی بە تەمەنی بەساڵاچوو، شەکرە و بەرزی فشاری خوێنەوە هەبوو.

الخلاصة

انتشار وعوامل خطر مرض الكبد الدهني المقيم بواسطة جهاز الفيبروسكان لدى المرضى الخارجيين: دراسة مقطعية من دهوك، العراق

الخلفية والأهداف: يعد تليف الكبد العامل الرئيسي للمرض والوفاة لدى الأفراد المصابين بأمراض الكبد المزمنة. في دراسة أجريت في مركز واحد، حددت هذه الدراسة انتشار الكبد الدهني، وعوامل الخطر، وتليف الكبد في العيادات الخارجية.

الطرق: شملت هذه الدراسة الاستشرافية المقطعية 195 مريضا من العيادات الخارجية ممن استوفوا معايير الأهلية المحددة مسبقا. خضع المرضى المؤهلون لتقييم تليف الكبد باستخدام جهاز FibroScan®، وهو أداة غير جراحية لتقييم تليف الكبد.

النتائج: شملت عينة الدراسة (متوسط العمر: 45.23 عامًا، الانحراف المعياري = 15.1) 48.7% من الشباب، و36.9% من الأفراد في منتصف العمر، و14.4% من كبار السن، والذكور (54.4%). وشملت عوامل الخطر الرئيسية التدخين (51.8%)، وداء السكري (12.3%)، وارتفاع ضغط الدم (5.6%)، والإصابة بفيروس التهاب الكبد B (4.6%). غاب التدهن الكبدي في 5.13% من الحالات، بينما أظهرت 94.9% منها درجة ما من التليف: خفيف (6.15%)، متوسط (12.82%)، أو شديد (75.9%). كان التندب المتوسط الشكل الأكثر شيوعًا للتليف الكبدي، يليه التندب الشديد (9%). بلغ معدل انتشار تليف الكبد بين المرضى الخارجيين 8% في هذه الدراسة. وبشكل عام، بلغ معدل انتشار مرض الكبد الدهني غير الكحولي بين المرضى الخارجيين 39% في هذه الدراسة. وكانت درجات تليف الكبد أعلى بكثير لدى المرضى المسنين مقارنة بالأفراد في منتصف العمر والشباب (21.43% مقابل 11.11% و2.11%؛ قيمة P < 0.0001). أظهر مرضى السكري أيضًا انتشارا أعلى لتليف الكبد مقارنة بغير المصابين بالسكري (16.67% مقابل 7.02%؛ p = 0.0020)، وكذلك مرضى ارتفاع ضغط الدم مقارنة بغير المصابين به (27.27% مقابل 7.07%؛ p = 0.0201).

الاستنتاجات: أظهرت هذه الدراسة ارتفاع معدل انتشار تليف الكبد ومرض الكبد الدهني غير الكحولي في العيادات الخارجية، وارتبط بتقدم السن ومرض السكري وارتفاع ضغط الدم.