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The Incidence of Hepatocellular Carcinoma in Iraq Population

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Introduction of Hepatocellular carcinoma (HCC)

It is the most common type of primary liver cancer in adults and Is currently the most common cause of death in people with cirrhosis.[1] HCC Is the third leading cause of cancer-related deaths worldwide. Hepatocellular carcinoma (HCC) is a major health problem worldwide, due to its high incidence (approximately 600000 new cases in 2000), and high rates of mortality [1]. The identification that chronic liver disease is the process relevant risk factor for this tumour, has made surveillance campaigns aimed at early detection of HCC possible and surveillance is now universally recognised to be the practical approach for improving treatment of HCC patients . The few cases (less than 5%) of HCC that do not develop on the background of chronic liver disease present late and usually have poor chances of cure.

Background

The development of HCC is a major global health problem , It's incidence has increased world wide

And nowadays it constitute the 5th most frequent cancer representing around 5% of all cancers, and

Estimated to rank 4th in terms of mortality of cancers incidence world wide , itaccounts for 80 –90%

Of all primary liver tumors . The Etiology of this tumor is multifactorial , certain viral, environmental

& hereditary causes of cirrhosis have a strong correlation with HCC . HCC is a highly malignant

Tumor with poor prognosis.

Risk factors

Since HCC mostly occurs in people with cirrhosis of the liver, risk factors generally include factors which cause chronic liver disease that may lead to cirrhosis. Still, certain risk factors are more highly associated with HCC than others. For example,while heavy alcohol consumption is estimated to cause 60–70% of cirrhosis, the vastmajority of HCC occurs in cirrhosis attributed to viral hepatitis (although there may be overlap).Recognized risk factors include:

- Chronic viral hepatitis (estimated cause of 80% cases globally)
  - Chronic hepatitis B (about 50% cases)
  - Alcohol use disorder: the most common cause of cirrhosis
  - Aflatoxin
  - Iron overload state (hemochromatosis)
  - Pyrrolizidine alkaloids
- Metabolic:
  - Nonalcoholic steatohepatitis: up to 20% progress to cirrhosis
  - Nonalcoholic fatty liver disease
  - Type 2 diabetes (probably aided by obesity)
- Congenital disorders:
  - Alpha 1-antitrypsin deficiency
  - Wilson's disease (controversial; while some theorise the risk increases, case studies are rareand suggest the opposite where Wilson's disease actually may conferprotection
  - Chronic hepatitis C (a Hemophilia, although statistically associated with higher risk of HCC,[15] this is due to coincident chronic viral hepatitis infection related to repeated blood transfusions.

Epidemiology

HCC is more common among males with a male:female ratio of 2.4 in its worldwide distribution.[3] The most common age at presentation is usually between 30 and 50 years.[4] HCC is predominant in Asian countries including China, Mongolia, Southeast Asia, and Sub-Saharan Western and Eastern Africa. The prevalence of HCC in developed countries of the world is lower, except Japan, Italy, and France. In the US surveillance, epidemiology, and end results (SEER) database program, HCC accounts for 65% of all cases of liver cancers. The incidence rate of HCC has increased from 1.4/100,000 cases/year between 1976–1980 to 6.2/100,000 cases reported in 2011.There are almost two times higher incidence of HCC among dark- skinned males compared to light-skinned males; a similar trend is seen among females with two times higher incidence rate among dark-skinned when compared to light-skinned.[8] The 5-year survival trend has improved by >60% from 1975 to 2005.[5]

Diagnostic

Hepatocellular carcinoma (HCC) is responsible for a large proportion of cancerdeaths worldwide. Deterioration at which time survival is measured in months. Long-term survival requires detection of small tumors, often present in asymptomatic individuals, which may be more amenable to invasive therapeutic options. Surveillance of high-risk individuals for HCC is commonly performed using the serum marker alfa- fetoprotein (AFP) often in combination with ultrasonography. Various other serologic markers are currently being tested to help improve surveillance accuracy. Diagnosis of HCC often requires more sophisticated imaging modalities such as CTscan and MRI, which have multiphasic contrast enhancement capabilities. Serum AFP used alone can be helpful if levels are markedly elevated, which occurs in fewer than half of cases at time of diagnosis. Confirmation by liver biopsy can be performed under circumstances when the diagnosis of HCC remains unclear.

HCC is frequently diagnosed after the development of clinical signs and symptoms of this serious disease.

Physical findings:

If the tumour is small and often without symptoms no physical signs may be found at all
Signs related to the chronic liver disease and/or underlying cirrhosis is
seen in more advanced cases.
Palpable mass in the upper abdomen, or a hard, irregular liver surface Tenderness in the upper right abdominal quadrant
Splenomegaly, ascites, jaundice (also symptoms of cirrhosis) Hepatic arterial bruit (heard over the tumour)
Signs that should raise a suspicion of HCC in patients with previously compensated cirrhosis:

Rapid deterioration of liver function New-onset (or refractory) ascites Acute intra-abdominal bleeding Increase jaundice
Weight loss and fever

New-onset encephalopathy Variceal bleeding
Patients with late-stage HCC may present with: Right upper quadrant abdominal pain Symptoms and signs of underlying cirrhosis Weakness

Abdominal s Nonspecific gastrointestinal symptoms Jaundice
Loss of appetite Weight loss Anorexia Laboratory findings:
Usually nonspecific Signs of cirrhosis:
Thrombocytopenia Hypoalbuminaemia Hyperbilirubinaemia Coagulopathy Electrolyte disturbances
welling
Liver enzymes abnormal, but nonspecific

Elevated alpha foetoprotein (AFP; requires definitions of levels and appropriatesetting)

Prevention

Factors that have been consistently shown to promote the prevention of HCC among the general population and chronic liver disease patients include coffee consumption, aspirin use, and metformin use, with the highest evidence for coffee use (the risk of HCC reduced by 40% for any coffee consumption vs no consumption). Evidence from two population-based studies demonstrated that statin use was associated with a 39% lower risk of liver cancer, which was notable in HCC but not in intrahepatic bile duct carcinoma [6]. High-quality meta-analyses and systematic reviews have shown that HCC risk, even though not fully eliminated, is reduced up to 80% in patients with hepatitis C virus (HCV)-related cirrhosis who attain sustained viral response (SVR) after the use of direct-acting antivirals.

Nonetheless, among those who achieved SVR, HCC risk was still high in the presence of continued alcohol use, older age, infection with HCV genotype 3, and elevated hepatic fibrosis markers(7)

Aime of study

To detect the prevalence of hepatocellular carcinoma in the patient with liver disese and aim of this study was to provide an updated overview on clinicopathological features of this serious disease.

Justification

Because the liver is the important organ in the body so we need to care for and detected any compilication in the liver and because hepatocellular carcinona themost commn type of cancer in the liver

Methodology

Type of study: It is diagnostic to asses hepatocellular carcinoma

- Study Design :

-Cross-sectional study used to evaluation hepatocellular carcinoma

- Study pattern:

Electronic questionnaire

Place & time of studey done in Thi-Qar Governorate/Al- Nasiriya city.in 2023/3/9

- study population: the population of thiqar 2milion the studey inculdes the pateint in hospital age frome 20 /70 year

Ethical consideration had been attained from the scientific Community Medicine / Department in College Medicine of Thi – Qar University and also written consent had been attained from the participants.

Definition of varible:. HHc is complex diseases affected the liver 1

Statstical Analysis A Chi square was used to check for any significant differences between the mean values of two continuous variables. The level P

Epidemiology anlysis. Prevalence of of HCC among population =numberof HHc pateint /population

Table(1):

Case	Type	No. of Patients	٪
History Of Chronic Liver Disease	Hepatitis	62	30%
	Alcoholic Liver Disease	31	15.12%
	Cirrhosis Of Unknown Etiology	29	14.1%
	Jaundice	78	38.04%
	Smoker	60	29. 26 %
	Disturbed Lipid profile	72	13.1%
	Decresed Weight	90	43.9%
	Total	205	

Table(2):

Gendet	With HCC	Without HCC	Total
Female	9	104	113
Male	25	67	92
Total	34	171	

Table(3): Prevlance of HCC and alcohol drinking

Drinking Alcohol	One Time	(3-4)times	More 4	Without Drink
31	8	7	16	174

Table(4): Prevalence of HCC with liver cirrhosis

With Liver Cirrhosis	Without Liver Cirrhosis	Total
29 16.4	148 83.6	177

Table(5): Prevalence of HCC With Hepatitis

With Hepatitis	Without Hepatitis	Total
62. 30.2	143 69.8	205

Table(6): Prevalence of HCC with jaundice

With Jaundice	With Out Jaundice	Total
78	127	205

Table(7): Prevlance of HCC with smoking

No. of Smokers	No. of nonsmokers	Total
60	145	205

Table(8):

Age Groups	Male	Female
18	2	2
18/24	3	2
24/40	6	2
41/60	13	3
More than 60 years	10	2

Results:

Prevalence of HCC with heptatis is 30% Prevalence of HCCWith liver chirosis is 14.5% Prevalence of HCC with alcohol is a 15.5 % Prevalence of HCC. With Jundic us 78% Prevalence of HHC with Smoker is 60%

Male to female ratio is approximately (3:1), The mean age of (57.1) yr . more common between ((41-60)) yrs old (28.25%) , . Increasing no. of patients

(16%) haven't such a history . Most of chronic liver diseases are due to previous history of hepatitis

B- infection (41.6%) . High level of AFP (66.6%), all of them are of standard type of HCC. Ascitic

Increse above 18 7%. 18/24 8.75%. 24_40 14%. 41-60 28.25

Above 60 21%

Fluid cytological study bloody (14%) & positive malignant cells (17.2%) . Liver biopsy (82.7%) had

More common in smoker and liver cihrosis

Chronic liver diseases, and (96.5%) moderate to poorly differentiated type of standard HCC,(3.5%)

Fibrolamellar type .Outcome of treatment , Conservative (35%), Injection therapy(3.5 ,

Debulking (9%:-

Strength of Study:

- The strength of this study included the following: a large number of random samples reached204 random
- Samples during a short period (2month,), where there was enough time to colectted sample

Limitations:

- There are some obstacles that this study faced, including the difficulty of dealingwell
- With some patients to fill out the questionnaire. Some patients are bothered by the large number of
- Questions, but their number was less compared to the rest of the patients. Also, poor teamwork to Complete this study.

Conclusions:

1. The main Etiological causes of HCC were History of chronic liver diseases and the main cause Past history of Hepatitis B. and Hepatitis C. viral Infection and liver cirrhosis of unknown Etiology.

2. The most common presenting symptoms Abdominal pain and abdominal swelling and theLeast one is Jaundice. And the most c

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