شبكة المعلومات الجامعية

بسم الله الرحمن الرحيم

شبكة المعلومات الجامعية

التوثيق الالكتروني والميكروفيلم

شبكة المعلومات الجامعية

جامعة عين شمس

التوثيق الإلكتروني والميكروفيلم

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بعض الوثائق الأصلية تالفة

BIOCHEMICAL STUDIES ON SERA FROM HEPATOCELLULAR CARCINOMA PATIENTS DURING TREATMENT WITH 5-FLUOROURACIL AND α-INTERFERON

Thesis submitted to the
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BY

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CONTENTS

List of abbreviations

HCC	:	Hepatocellular Carcinoma.
MLC	:	Metastases liver Carcinoma.
HBV	:	Hepatitis B virus.
HCV	:	Hepatitis C virus.
ALP	:	Alkaline phosphatase.
H-ALP	:	Hepatocellular carcinoma - specific - alkaline phosphatase
S.G.P.T	:	Serum glutamic pyruvic transferase.
S.G.O.T	:	Serum glutamic oxaloacetic transferase.
LDH	:	Lactic dehydrogenase.
γ -GTP	:	Gamma glutamyl transpeptidase.
P.T	:	Prothrombin time.
AFP	:	Alpha-feto-protein.
DCP	:	Des-γ -carboxyprothrombin.
PIVKAII	:	Protein induced vitamin K antagonist II.
ELISA	:	Enzyme-linked immunosorbent assay.
RIA	:	Radio immuno assay.
SC	:	Staphylocoagulase.
CEA	:	Carcino embryonic antigen.
5-FU	:	5-Fluorouracil.
FUR	:	Fluorouridin.
FUMP	:	fluorouridine-monophosphate.
FUDP	:	fluorouridine-diphosphate.
FUTP	:	fluorouridine-triphosphate.
DU	:	deoxyuridine.
IFN-α	:	Alpha-interferon.
IFN- β	:	Beta-interferon.
IFN- γ	:	Gamma-interferon.
rIFN α-2b	:	recombinant interferon alpha-2b.

T.S.	:	Tumor size.
IU	:	International unit.
IU/L	:	International unit/ litter.
IU/ml	:	International unit/ ml.
I.V.	:	Intravenous injection.
S.C.	:	Subcutaneous injection.
M.IU	:	Million international unit.
Vit K	:	Vitamin K.
B	:	Before.
D	:	During.
A	:	After.
% BD	:	Percent change before and during.
% BA	:	Percent change before and after.
GI	:	Group I.
G II	:	Group II.
G III	:	Group III.
TS	:	Thymidylate synthetase.
AGE	:	Agarose gel electrophoresis.

Chapter 1

INTRODUCTION

INTRODUCTION

A. The liver

Anatomy:- Is the largest unpaired organ in the body, weighing 1200 - 1500 g in adult and 80 g in the new born. It is pyramidal in shape with its apex to the left and base to the right. It occupies all of the right upper quadrant of the abdomen above the costal margin except for a small portion of the epigastrium that is not protected by the bony cage. It extends 5 to 10 cm to the left of midline(1). It has right and left lobes, the right lobe is larger; it contains the quadrate lobe on the anteromedial part of the posterior surface.

The left lobe is relatively larger in infancy and contributes to the protuberant abdomen at that age(2).

The liver has an arterial and venous blood supply and total blood flow is normally about 1500 ml/min. The arterial supply is by the hepatic artery, which enters the liver in the porta hepatis and is distributed throughout the liver via the portal tracts. In man, the hepatic artery supplies about 35% of the total liver blood flow and about 50% of its total oxygen supply. The portal vein drains the blood from alimentary tract, spleen, pancreas and gall bladder. It also enters the liver via the portal tracts and empties its blood into the sinusoid. Histologically, the liver is divided into lobules with regular sinusoid separated by plates of liver cells (hepatocyte); the sinusoid are capillaries which are lined by endothelial and phagocytic (Kupffer) cells(3). The hepatocytes are arranged in single-cell plates which lie between the sinusoid. Between the hepatocyte and the sinusoidal cells is the space of disse which contains fluid draining to the lymphatic in the portal tract(3).

Physiology:-

Liver cells carry out a wide variety of metabolic functions facilitated by the rich blood supply derived from the gut as well as systemic circulation, and by the intimate contact between hepatocyte and blood due to highly permeable sinusoidal lining. All hepatocytes are capable of performing the many functions of the liver (2) such as carbohydrate metabolism, protein metabolism, and lipid metabolism. In addition, miscellaneous metabolic functions of the liver are performed such as :

1-Storage of vitamin:

The liver has a particular propensity for storing vitamins. The single vitamin stored in greatest quantity in the liver is vitamin A, but large quantities of vitamin D and vitamin B_{12} are normally stored as well. Sufficient quantities of vitamin A can be stored to prevent deficiency for as long as 10 months. Sufficient vitamin D can be stored to prevent deficiency for as long as 3 to 4 months. And vitamin B_{12} can be stored for at least a year and may be several years(3).

2-Removal or excretion of drugs:

The very active chemical medium of the liver is well known for its ability to detoxify or excrete into the bile, many different drugs including sulfonamide, penicillin, ampicillin, and erythromycin. In a similar manner, several hormones are conjugated by the liver, including thyroxine and essentially all the steroid hormones such as estrogen, cortisol and aldosterone. Therefore liver damage can often lead to the excess accumulation of one or more of these hormones in the body fluids and therefore can cause manifestation of hormone excess(3).