

بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

(وَاسْتَغْفِرُوا رَبَّكُمْ ثُمَّ تُوبُوا إِلَيْهِ إِنَّ رَبِّي رَحِيمٌ وَدُودٌ)

صدق الله العظيم

سورة هود (90)

Dedication

To my Father, who teaches me how given is be

To my mother who show me the meaning of patience and save me love without
limit

To all HCC patients specially

To my uncle ABD Ellattife.

To my teachers, and To my family

To my friends

Acknowledgment

Firstly we are grateful to the supreme being allah,bacause without his help all this is impossible.

Iam deeply indebted to my supervisor **Prof. Babekr** for his help and guidance during this study. Iam also grateful to his patience assistance and invaluable advice.

Especial thanks to **Dr.Ameir Mohamed Saleh**.Gratitude is also extended to my sister **Rania Abd Elkareem** and my brother **Amro Abd Elkareem** .especial thanks to my frind **Amel Mohamed Alnor**.Iam grateful to all member of the department of hematology, college of medical laboratory science of Sudan University.

Abstract

This study included 20 patients, in Ibn Seena Hospital with hepatocellular carcinoma in which we tested for CBC and estimated the prothrombin time and that is in period from February 2011 to August 2011.

Hepatocellular carcinoma is found to affected 14 [70%] males and 6[30%] females. It occurs in the age more 40 years and it is rare in the age less than 40 years old.

The study showed that the prothrombin time in these HCC patients is significantly elevated with P value (< 0.05). Hemoglobin and PCV is significantly elevated with P value (< 0.05) that indicates HCC is related to secondary polythyceamia .

Some patients have low hemoglobin and other blood parameters due to treatment or chronic condition. But some patients have absolute leucocytosis due to some infections.

الخلاصة

هذه الدراسة تضمنت 20 مريض بسرطان الكبد في مستشفى ابن سينا وقد تم فحص بعض معدلات الدم كما تم فحص زمن الثرومبين وذلك في الفترة ما بين فبراير 2011 والي اغسطس 2011.

سرطان الكبد يؤثر في 14 (70%) رجال و6 (30%) في الاناث. ويحدث في الاعمار اكبر من سن 40 كما انه نادر في الاعمار اقل من 40.

هذه الدراسة اظهرت فرق معنوي في زمن الثرومبين في مرضى سرطان الكبد, والهموكلوبيين والحجم الدم التراكمي وذلك يدل علي ان سرطان الكبد يؤدي الي .

بعض المرضى لديهم انخفاض في معدل الهموكلوبيين وباقي مكونات الدم وذلك نتيجة لتأثير العلاج الكيميائي او بعض الالتهابات المزمنة. ولكن بعض المرضى لديهم ارتفاع مطلق في كريات الدم البيضاء نتيجة بعض الالتهابات.

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List of abbreviations

AFP	Alpha-fetoproteins
CT	Computerized Tomography
CBC	Complete Blood Count
DIC	Disseminated intravascular coagulation
EPO	Erythropoietin
EDTA	Ethylene diamine tetra acetic acid
FNH	Focal nodular hyperplasia
Hb	Hemoglobin
HGB	Hemoglobin value
HCT	Hematocrite
HCC	Hepatocellular carcinoma
HBV	Hepatitis B Viruses
HCV	Hepatitis C Viruses
INF	Interferon
LED	light emitting diode
MPCT	Multi planner computed Tomography
MRI	Magnetic Resonance Imaging

MCH	Mean Corpuscular hemoglobin
MCV	Mean Corpuscular Volume
MCHC	Mean Corpuscular hemoglobin Concentration
PFCP	Primary familial and congenital polycythemia
PTCP	Pseudo thrombopenia
PRV	Polycythemia rubra Vera
Plts	Platelet
PV	Polycythemia Vera
PT	Prothrombin Time
P.P.P	Platelet poor plasma
PCV	Packet Cell Volume
tp A	tissue plasminogen activator
TPFI	Tissue Plasminogen Factor Inhibitor
TAE	Tran catheter arterial embolization
US	Ultra Sound
RBCs	Red Blood Cells
WBCs	White Blood Cells
W-SCC	WBC-small cell count

W-MCC	WBC-middle cell count
W-MCR	WBC-middle cell ratio
W-LCR	WBC-large cell ratio