بسم الله الرحمن الرحيم

(قَالُوا سُبْحَانَكَ لا عِلْمَ لَنَا
إِلَّا مَا عَلَّمْتَنَا إِنَّكَ أَنْتَ
الْعَلِيمُ الْحَكِيمُ)

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Detection of Topoisomerase II In Hepatocellular Carcinoma Patient Relevant to Chemotherapy Treatment

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By

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٢٠٠٩

Detection of Topoisomerase II In Hepatocellular Carcinoma Patient Relevant to Chemotherapy Treatment

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and Rham Zaki Ahmed[4]

Introduction: Hepatocellular carcinoma (HCC) is one of the most common cancers worldwide Hepatitis C virus is one of the major causes of chronic liver disease and hepatocellular carcinoma. The most widely used chemotherapeutic agent has been doxorubicin, both as a single agent and in combination with other drugs.

Aim: Determination of Topoisomerase II alpha level in hepatocellular carcinoma patients, evaluation of the response to topoisomerase II alpha inhibitor in hepatocellular carcinoma patients,and evaluation of the relation between the response to chemotherapy and Topoisomerase II alpha.

Methods: Immunohistochemistry was performed to investigate Topoisomerase II alpha expression in 50 HCC tissuses and clinicopathological materials were analyzed with stastical methods. Kaplan-Meier method was used to calculate survival curves, and log-rank test was performed to compare differences in survival rates of patients with overexpression with negative results.

Resuts: the studied marker was detected by IHC in 38% of the patients and the response rate to the doxorubicin was 16% .there was a significant correlation between the overexpression and the response and

the overallsurvival .there was a significant correlation also between the response and the tumour size, grade, and patient performance status .

Conclusion: The topoisomerase II alpha overexpression has a significant correlation to doxorubicin response and patient survival in hepatocellular carcinoma patient.

Key words: HCC- HCV- chemotherapy-topoisomerase.

Dedication

My work is dedicated to:

My family

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Above all and first of all ,praise and thanks must be to *Allah*

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List of Abbreviations

AFP	Alpha-Fetoprotein
AJCC	American Joint Committee on Cancer
AR	Androgen Receptor
BCLC	Barcelona Clinic Liver Cancer
CAH	Chronic active hepatitis
CDK	Cyclin dependent kinase
CLD	Chronic Liver Disease
CLIP	Cancer of the Liver Italian Program
CPA	Cyproterone Acetate
CR	Complete Response
CRP	C-Reactive Protein
CT	Computed Tomography
CUPI	Chinese University Prognostic Index
DCP	Des-gamma-carboxyl prothrombin
DHT	Dihydrotestosterone
DIC	Disseminated Intravascular Coagulopathy
EGFr	The Epidermal Growth Factor receptor
HAI	Hepatic Artery Infusion
HBSAg	Hepatitis B Surface Antigen
HBV	Hepatitis B Virus
HCC	Hepatocellular Carcinoma
HCV	Hepatitis C Virus
HCVAb	Hepatitis C Virus Antibodies

JIS	Japan Integrated Staging
LHRH	Luteinizing Hormone Releasing Hormone
LOH	Loss of Heterozygosity
MDR	Multi-Drug Resistance
MELD	Model for end stage liver disease
MRI	Magnetic Resonance Imaging
MsAFP	Monosialyated Alpha-Fetoprotein
OLT	Orthotopic Liver Transplantation
PEI	Percutaneous Ethanol Injection
PIAF	Cisplatin, Interferon alpha-2b, Doxorubicin and 5-Florouracil
PMCT	Percutaneous Microwave Coagulation Therapy
Rb	Retinoblastoma
RCV	Refrence Change Value
RFA	Radiofraquency Ablation
TACE	Transcatheter Arterial Chemoembolization
US	Ultrasonography

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Table (19): The correlation between clininopathological parameters and topoisomerase II alpha Expression in hepatocellular carcinoma patients

Clinicopathological parameters	Topoisomerase II alpha expression				Total No.	P-value
	- ve		Overexpression			
	No	*%*	*No*	*%*		
Alpha- fetoprotein						
< 400 ng/dl	7	22.6	1	5.3	8	0.13
> 400 ng/dl	24	77.4	18	94.7	42	
Child-pugh class						
A	28	90.3	16	84.2	44	0.66
B	3	9.7	3	15.8	6	
Tumour size						
< 5cm	8	25.8	8	42.1	31	0.23
> 5cm	23	50	11	57.9	19	
Tumour grade						
Well diff.(I + II)	26	83	15	78	33	0.04*
Poor diff(III)	5	16.1	4	21.1	9	
Hepatitis markers:						
HCV	17	54.8	13	68.4	30	0.36
HBV	8	25.8	2	10.5	10	
HBV+HCV	5	16.1	2	10.5	7	
- ve	1	3.2	2	10.5	3	
Sex						
Male	30	96.8	17	89.5	47	0.55
female	1	3.2	2	10.5	3	

* Significant.

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