PERIOPERATIVE ACUTE PHASE RESPONSE AND OUTCOME OF HEPATIC RESECTION, AN EXPERIMENTAL STUDY

Thesis
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بسم الله الرحمن الرحيم

((قالوا سبحانك لا علم لنا إلا ما علمتنا انك أنت العليم الحكيم))

صدق الله العظيم

سورة البقرة الآية ٣٢

To my colleges

قال رسول الله صلى الله عليه وسلم

(خيركم من تعلم العلم وعلمه)

صدق رسول الله

الحديث

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Abstract

Identification of patients at risk of postoperative complications could have an impact on the indications for a procedure as well as permitting modifications of treatment to reduce the surgical risk.

Role of cytokines in patients having operation is still not completely understood. Some investigator have reported that the presence of postoperative high concentration or persisted high concentration of interleukin-6 (1L-6) and tumor necrosis factor alpha (TNF-α) are associated with high mortality. C-reactive protein may be used as a marker of severity of injury. Liver is warranted because evidence indicate that hepatic functional deterioration contribute to clinic morbidity due to its synthesis of acute phase protein and its high ability to synthesize urea.

Aim of work was to evaluate the correlation between perioperative acute phase response and outcome of hepatic resection.

This study was conducted on thirty hamsters. They were divided in three groups: control group, skin wound infection group and bone fracture group. All were exposed to hepatic resection. Blood samples were taken perioperative to estimate levels of some acute phase response proteins and to study their relations to postoperative morbidity and mortality.

High preoperative acute phase proteins lead to higher morbidity and mortality in post operative period. Therapeutic intervention with anti cytokines may be helpful in decreasing these postoperative complications.

Key wards: IL6 – CRP – Postoperative complications – Hamsters.

List of Contents

List of figures

List of tables

LIST OF ABBRIVIATION:

5HT	5–Hydroxytyptamine (serotonin)
99m TC-GSA	99m Technetium-galactosyl human serum albumin
ADH	Antidiuretic hormone
AFP	Alpha fetoprotein
ALT	Alanine Aminotransferase
C3a	Complement ,component 3, minor part
CPR	C-reactive protein
CT	Computed tomography
CUSA	Cavitron Ultrasonic Surgical Aspirator
DIC	Disseminated intravascular coagulation
EGF	Epidermal growth factor family
ELISA	Enzyme-Linked ImmunoSorbent Assay
ESR	Erythrocyte sedimentation rate
FDPs	Fibrin degredation products
Fig.	Figure
FUO	Fever of unknown origin
HCC	Hepatocellular Carcinoma
HGF	Hepatocyte Growth Factor
HSP	Heat shock protein
Hx & E	Heamatoxylin & Eosin
ICAMs	Intercellular adhesion molecules
IFN – α	Interferon alpha
IGF	Insulin – like growth factor from liver
IL6	InterLeukin
IOUS	Intraoperative ultrasound
IPSCH	Intraperitoneal Septic Complications after Hepatectectomy

IVC	Inferior vena cava
LFA –1	Lymphocyte function associated antigen 1
LPS	Lipopolysaccharide
Lt.	Left
LTB_4	Leukotriene B_4
LUD	Liver uptake density
P value	Probability Value
PAF	Platelet Activating Factors
PDGF	Platelet derived growth factor
Pg	Pico gram
PT	Prothrombin time
PTT	Partial thromboplastin time
RES	Reticuloendothelial System
SD	Standard Deviation
SGPT	Serum glutamic pyruvic transferase
SRS	Slow reacting substance
SSR	Subsegmental resection
TACE	Transarterial chemoembolization
TBRI	Theodor Bilharz Research Institute
TEN	Total enteral nutrirional
TFG ß	Transforming growth factor ß family
TGF.	Transforming Growth Factor
T_H	T helper cell
THVE	Total hepatic vascular exclusion
TNF	Tumor Necrosis Factor
TPN	Total pareteral nutritional
TxA_2	Thrombosane A_2
Ug	Microgram
VCAM	Vascular cell adhesion molecule