شبكة المعلومات الجامعية

بسم اللّه الرحمن الرحيم

شبكة المعلومات الجامعية

التوثيق الالكتروني والميكروفيلم

شبكة المعلومات الجامعية

جامعة عين شمس

التوثيق الإلكتروني والميكروفيلم

قسم

نقسم باللّه العظيم أن المادة التي تم توثيقها وتسجيلها علي هذه الأقراص المدمجة قد أعدت دون أية تغيرات

يجب أن

تحفظ هذه الأقراص المدمجة بعيدا عن الغبار

شبكة المعلومات الجامعية

بعض الوثائق الأصلية تالفة

بالرسالة صفحات
لم ترد بالأصل

Mean platelet volume indicator for systemic inflammation in cirrhotic patients with spontaneous bacterial peritonitis

A Thesis

Submitted for partial fulfillment of (M.Sc.) in Internal Medicine

By

Abd El-Azem Mostafa Abd El-Azem

M.B.B.Ch.

Supervised by

Prof/ Khaled Mohamed Abd El-Wahab

Professor of internal medicine and gastroenterology

Prof/ Moataz Mohamed Sayed

Professor of internal medicine and gastroenterology

DR/ Mohamed Osama Ali

Lecturer of internal medicine and gastroenterology

Faculty of Medicine – Ain Shams University

2020

بسم الله الرحمن الرحيم

قالوا

سبحانك لا علم لنا
إلا ما علمتنا إنك أنت
العليم الحكيم

صدق الله العظيم

سورة البقرة الآية: ٣٢

Acknowledgemen

*First of all, all gratitude is due to **Allah** almighty for blessing this work, until it has reached its end, as a part of his generous help, throughout my life.*

*Really I can hardly find the words to express my gratitude **Prof/ Khaled Mohamed Abd El-Wahab,** Professor of internal medicine and gastroenterology, for his supervision, continuous help, encouragement throughout this work and tremendous effort she has done in the meticulous revision of the whole work. It is a great honor to work under her guidance and supervision.*

*I would like also to express my sincere appreciation and gratitude to **Prof/ Moataz Mohamed Sayed,** Associate Professor of internal medicine and gastroenterology, for his continuous directions and support throughout the whole work.*

*I would like also to express my sincere appreciation and gratitude to **DR/ Mohamed Osama Ali,** Lecture of internal medicine and gastroenterology, for his continuous directions and support throughout the whole work.*

Abd El-Azem Mostafa

List of Content

List of Tables

List of Figures

LIST OF ABBREVIATIONS

AASLD	American association of study of liver disease
ACLD	Advanced chronic liver disease
ACLF	Acute on chronic liver failure
ADP	Adenosine diphosphate
AFI	Ascitic fluid infection
AFP	Alpha fetoprotein
AKI	Acute kidney injury
ALT	Alanine Aminotransferase
AST	Aspartate Aminotransferase
BCLC	Barcelona clinic of liver cancer
BD	Bone disorder
BNP	Brain natriuretic peptide
Cacld	Compensated advanced chronic liver disease
CBC	Complete blood count
CNNA	Culture negative neutrocytic ascites
CRP	C-Reactive Protein
CT	Computed tomography
EASL	European association for study of liver
ECOG	European cooperative oncology group
ELF	Enhanced liver fibrosis
ESR	Erythrocyte sedimentation rate
HB	Hemoglobin
HBV	Hepatitis B virus

HCC	Hepatocellular carcinoma
HCV	Hepatitis C virus
HE	Hepatic Encephalopathy
HPS	Hepato pulmonary syndrome
HRS	Hepato renal syndrome
HVPG	Hepatic venous pressure gradient
INR	International normalized ratio
IPVD	Intra pulmonary vascular dilatation
LDH	Lactate dehydrogenase
LVP	Large volume paracentesis
MAP	Mean arterial pressure
MELD	Model of end stage liver disease
MPV	Mean platelet volume
MRI	Magnetic Resonance Imaging
NASH	Nonalcoholic steatohepatitis
NPV	Negative P-value
OLT	Orthotopic liver transplantation
OS	Overall survival
PBC	Primary biliary cirrhosis
PDGF	Platelet derived growth factor
PDW	Platelet distribution width
PEI	Percutaneous ethanol injection
PICD	Paracentesis induced circulatory dysfunction
PLT	Platelet
PMNC	Polymorph nuclear count

PPV	Positive P-value
PRA	Plasma renin activity
PSC	Primary Sclerosing Cholangitis
PSE	Porto systemic encephalopathy
PST	Performance status
PVT	Portal vein thrombosis
RA	Rheumatoid arthritis
RBC's	Red blood cells
RFA	Radiofrequency ablation
ROC Curve	Receiver operating characteristic curve
SBP	Spontaneous bacterial peritonitis
SIRS	Systemic inflammatory response syndrome
SLE	Systemic lupus erythematosus
SPSS	Statistical package for social sciences
TACE	Trans arterial chemoembolization
TE	Transient Elastography
TGFB1	Transforming growth factor B1
TIMPs	Tissue inhibitor of metalloproteinase
TLC	Total leucocytic count
US	Ultrasound

Abstract

Introduction: spontaneous bacterial peritonitis (SBP) is the most common infection in patients with cirrhosis [1] .Spontaneous bacterial peritonitis is found in patients where besides the increase of polymorphonuclear counting, they present a positive result of culture [2] . The BMN count as not always quickly available in clinical practice and the culture result usually takes 72 hours or more [3] .The use of additional markers that are rapidly and easily applicable, may add significant benefit for predicting the development of spontaneous bacterial peritonitis and achieving diagnostic accuracy [4] .Platelet size is a determinant factor of platelet proinflammatory functions. Several studies have found relationship between the mean platelet volume (MPV) and pro-inflammatory conditions, particularly acute infections [5]. **Aim:** to identify a mean platelet volume (MPV) cutoff value which should be able to predict the presence of sponataneous bacterial peritonitis. **Settings and designs:** a cross sectional observational study, carried out on 40 patients with AFI and 40 patients without AFI**. Methods:** Patients were classified into two groups, ***group A*** (SBP) which included 40 patients with ascetic fluid PMN count ≥ 250 cells / mm^3 and ***group B*** (non/SBP) which included another 40 patients with ascetic fluid PMN count < 250 cells / mm^3. All studied patients were subjected to history taking, Clinical examination and routine laboratory investigations including: CBC including platelet number and MPV, liver function test including (ALT, AST, albumin, and direct & total bilirubin), kidney function test including (BUN &creatinine), PT, PTT, INR, ESR and CRP .Abdominal-pelvic ultrasonography was done for all patients. Aspirated ascetic fluid samples were immediately examined for bacteriological cultures. **Statistical analysis used:** Statistical presentation and analysis of the present study was conducted, using the mean, standard deviation, independent samples t-test, Chi-square, Mann-Whitney U test and Analysis of variance [ANOVA] tests by SPSS version 22 software .Tukey test was used .Receiver operating characteristic (ROC) curve analysis was used to identify optimal cut-off values of MPV and with maximum sensitivity and specificity for differentiation of cirrhotic patients with SBP from those without SBP. Spearman's correlation analysis was done. **Results:** MPV was significantly higher in SBP-patients ***(Group A)*** than that of non-SBP patients ***(Group B)*** (11.6820±1.19303 ***fL*** versus 9.0325±1.12441 **fL**) ***(P-value = 0.001)*** .MPV has positive correlation with Ascitic sample TLC and Ascitic sample PMNC in Group A. ROC curve shows that MPV cut off value is10.25with 85% sensitivity and 75% specificity .**Conclusion:** MPV may serve as a non-invasive, cheap and rapid test for detection and diagnosis of spontaneous bacterial peritonitis (SBP) with a sensitivity and specificity of 85% and 75% respectively.

Keywords: spontaneous bacterial peritonitis ,Mean platelet volume