### بسم الله الرحمن الرحيم

# Sudan University of Sciences and Technology College of Graduate Studies

# Evaluation of Haemostatic Mechanisms in Sudanese Patients With Gastrointestinal Bleeding

تقويم آلية التخثر لدى المرضى المصابين بأمراض النزف المعوي بمركز محمد صالح إدريس للنزف المعوى

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# بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

: قال الله تعالى {يَرْفَعِ اللَّهُ الَّذِينَ آمَنُوا مِنكُمْ وَالَّذِينَ أُوتُوا الْعِلْمَ دَرَجَاتٍ}

صدق الله العظيم

سورة المجادلة الآية 11

# **Dedication**

To source of my life My father and My mother

To source of my interesting in life

My husband

To source of my happiness My sisters and my brothers

To all patients suffering from gastrointestinal bleeding with my hopeness to get cure.

maha

#### **ACKNOWLEDGEMENT**

First of all the thanks is for Allah

I would like to express my gratitude to Dr. munsoor to his help and guidance, my special thanks to all those who have helped me through their assistance and guidance in performing this research, special thanks to all staff of Mohammed Salih Idres center for GIT bleeding for assistance.

I would thank the staff of hematology department, and to all my colleagues in of al Sudan university of science and Technology.

lastly the great thanks is for my family to assistance, supports and thank care for this research.

#### **Abstract**

This study was carried out at Mohammed Salih Idres center for gastrointestinal bleeding during the period from January to feb 2010,

prothrombin time (PT), activated partial thromboplastin time (APTT) and platelet count were measured to 50 gastrointestinal bleeding patients, 43 were males (86%) and 7 females (14%) with mean age 47 years, compared with 30 healthy individual as control group.

All sample were analyzed to determine the effect of GI bleeding on coagulation and correlate coagulation parameters investigated to age, gender and causes of GIT bleeding.

The results showed that PT was significantly prolonged in patients than controls (P=0.00), APTT was slightly prolonged in patients (P=0.05) and platelet count was significantly decreased in patients than control (P=0.00).

Patients with oesphagus variances were having a normal intrinsic and extrinsic pathway and platelet count; Patients with portal hypertension were having a decrease platelet count only, and Patients with other causes of GIT bleeding were having a defect in the intrinsic and extrinsic pathway and decrease in platelet count.

No statistically significant correlation was found between coagulation parameters investigated and gender and age in those patients.

# ملخص الأطروحة

أجريت هذه الدراسة بمركز محمد صالح إدريس للنزف المعوي في الفترة من يناير الى فبراير 2010م تم فيها قياس زمن البروثرومبين وزمن الثرومبوبلاستين المنشط جزئيا كما تم قياس عدد الصفائح الدموية وذلك لمعرفة تأثير النزف المعوي على هذه القياسات بالاضافه الى معرفة العلاقة بين هذه القياسات وعمر المعوى على هذه النوف المعوى المعوى النزف المعوى النرف المعوى النرف المعوى النرف المعوى النرف المعوى المعوى النرف المعوى النرف المعوى النرف المعوى النرف المعوى النرف المعوى

.(%شملت هذه الدراسة 50 مريضا 43 ذكور (86%) و 7 من الاناث (14)

كان متوسط العمر لديهم 47 سنه و 30 شخصا طبيعيا كان متوسط العمـر لـديهم 21.

أظهـرت النتـائج معـدلات أكـثر مـن الطبيعيـة لكـل مـن زمـن البروثرومـبين والثرومبوبلاستين المنشط جزئيا ونقصان في عدد الصفائح الدمويه فـي المرضـى والثرومبوبلاستين المنشط جزئيا ونقصان في عدد الصفائح الدموعة الضابطة .

المرضي الذين يعانون من دوالي المرئ لم تكن لديهم أي مشاكل في المسار الداخلي او الخارجي لعمليه التجلط ومعدل طبيعي في عدد الصفائح الدموية اما المرضي الذين يعانون من فرط التوتر البابي كان لديهم نقصان في عدد الصفائح الدموية فقط, والمرضي الذين يعانون من أسباب مختلفة أخرى كان لديهم اعتلال في المسار الداخلي والخارجي لعملية التجلط و كذلك نقصان في عدد الصفائح . الدموية

لم يتضح وجود علاقة احصائية بين زمن البروثرومبين والثرومبوبلاستين المنشط . جزئيا وعدد الصفائح الدموية وبين جنس وعمر المريض

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#### **Abbreviations**

a2-plasmin inhibitor a2-PI

**ADP** Adenosin diphosphate

Activated partial thrombopastin **APTT** 

> AT Anti thrombin

**ATP** Adenosine tri phosphate

> CHO charbohydrate

D.W Distilled water

**ECS** Endothelial cells

**EHPVO** Extra hepatic partal verous obstructive

**FSP** 

Fibrin degradation product **FDP** 

> **FFP** Fresh frozen plasma

Fibrin split product Guanosine di phosphate **GDP** 

**GIT** Gastrointestinal tract ATP

> GP Glycoprotein

Gastrin releasing peptide **GRP** 

	GTP	Guanosine tri phosphate
НМ	1WK	high molecular weigh kininogen
Н	IPS	Hermansky pudlak syndrome
1	BD	inflammatory bowel disease
LACT	Lipoprote	n-associated coagulation in hibitor
NSAIDs	non	-steroidal anti-inflammatory drugs
	O.V	Oesophegus varaces
	PA	tissae plasma activator
PAE	-1	plasminogen Activeator in hibfor
	PAI-1	plasmin activator inhibitor-1
		PC Protein C
	PDGF	platelet drived growth factor
	PF	platelet factor
	PGE2	2 ProstaglandinsE2
	PHT	Portal hypertension
PIVKAs	pratein	induced by vitamin K antagonists
	PPF	Periportal fibrosis
	PPP	Platelet poor plasma
	PT	Prothombin time
	VWF	Von willebrand factor

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