# الآية ( و قل ربى زدنى علما)

الاية: (114) سورة طه

## **Dedication**

To:

Soul of My parents...

My husband...

My sisters and Brothers...

## **Acknowledgment**

First of all, I thank Allah the Almighty for helping me complete this project. I thank Prof. Al Safi Ahmed Ball my supervisor, for his help and guidance.

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#### List of abbreviations

DVT Deep vein thrombosis

PE Pulmonary embolism

D Diastole

DM Diabetes Mellitus

FVW Flow Velocity Waveform

PSV Peak systolic velocity

PSVR Peak systolic velocity ratio

CVI Chronic venous insufficiency

PT/INR Prothrombin time/international normalize ratio

CFV Common femoral vein

CFA Common femoral artery

SFV Superficial femral vein

SFA Superficial femoral artery

PTV Posterior tibular vein

PTA Posterior tibular artery

ATV Anterior tibular vein

ATA Anterior tibular vein

GSV Great Saphenous vein

SSV Short saphenous vein

PER V Peroneal vein

PER A Peroneal artery

SM Soleus muscle

GM Gastrocnemius muscle

MF Muscular fascia

SV Soleal vein

GV Gastrocnemius vein

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#### **Abstract**

This is an analytical prospective study used to characterize the lower limb vascular abnormality and other related abnormality in Doppler ultrasound in patient with lower limb pain or swelling or those are highly suggestive for this type of disease in period from January 2013 to September 2016. hundred and ten patient; Firstly patient with differential diagnosis of these selected lower limb disease were underwent successful laboratory and imaging investigation particularly for those suffering from Lower Limbpain and associated symptoms, then the lower limbswere examined with real-time sonography, using mobile GE LOGIQ 5 ultrasound machine, ideally after 6-hoursof fasting. Both supine and right anterior oblique views were obtained. Sagittal, transverse, coronal, and subcostal oblique views are suggested using both standard abdominal transducer and a higher frequency transducer. The result showed that the most affected age group by Deep Venous Thrombosis (DVT) was 40-50 years followed by (30-40 years) and the varicose vein affect the population in age group of (30-40 years) which is the active age. Lab examination prothrombin time (PT)international normalized ratio (INR) "PT/INR" and D-dimer very important for correlation with ultrasound sometimes it gives abnormal result this due to liver diseases. DVT was noted in 14.8% from total population, 20.5% having varicose vein, where most people with lower limbs pain and swelling showed normal result in 34.3%. Where the most affected limb more the 50% at both site and 29% for the left one, where the majority of the patient suffering from lower limbs pain in 45% has strong indicator for lower limbs Doppler scan. The most important outcome from the pain and swelling resultedin deep veins thrombus which is most important ultrasound clinical finding.

#### المستخلص

هذة در اسة ميدانية تحليلية تستخدم لو صف اأطر اف الأو عية الدموية الغير طبيعية و غير ها ذات الصلة بالموجات فوق الصوتية والدوبلر في المريضيذويالألم في الأطراف أو تورم أو تلك الموحية لهذا النوع من المرض في الفترة من يناير 2013 إلى سبتمبر 2016. مائتين و عشرة مريض، أولا المريضيذوي التشخيص المتباين التفريقي المختارة لامراض الالطراف السفلي التي خضعت بنجاح للفحوصات المخبرية والتصوير و التحقيق بشكل خاص و لأولئك الذين يعانون من الالم الاطراف السفلي وما يرتبط بها من أعراض، ثم تم فحص الأطراف السفلية ديناميكيا بالموجات فوق الصوتية، وذلك باستخدام جهاز الموجات فوق الصوتية المحمول جنرال الكترك لوجيك 5، بعد 6 ساعات من الصيام كاجراء مثالي. سواء تم الحصول على وجهات التصوير الأمامية المائلة باليمين، عرضية، وتحت الضلوع والجهات المائلة باستخدام مسبار البطن القياسي وأعلى مسبارتردد. وأظهرت النتيجة أن الفئة العمرية الأكثر تضررا من وريدي عميق التخثر كانت 40-50 سنة تليها (30-40 سنة) والدوالي الوريدييؤثر على السكان في الفئة العمرية من (30-40 عاما) وهو عمر نشط. فحص المختبر البروثرومبين المؤقت النسبة تطبيعة الدولية ود-ديمر مهم جدا للعلاقة مع الموجات فوق الصوتية لانه في بعض الأحيان يعطى نتيجة غير طبيعية وذلك بسبب أمراض الكبد. ولوحظ وجودجلطة وريدية عميقة في 14.8٪ من مجموع السكان، 20.5٪ منهم دوالي الوريد، أظهر تالدراسة أن أغلب الناس يعانون من آلام في الأطراف السفلية وتورم نتيجة طبيعية في 34.3٪ من الحالات. حيث الطرف الأكثر تضررا أكثر من 50٪ في كلا الجانبين و 29٪ لليسار، حيث الغالبية العظمي من المريضي يعانون من آلام فيالأطرافه السفلية في 45٪ ولديها مؤشر قوى بمسح دوبلر. أهم نتائج ألام و التورم أسفرت عنتخثرة في الأوردة العميقة التي هي أهم النتائج الموجات فوق الصوتية السريرية.