

بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

The National Ribat University
Faculty of Graduated Studies and Scientific Research

The Color Doppler Ultrasound of Forearm Arteries Prior
To Coronary Artery Bypasses Grafting In Saheroone
Special Hospital 2015

A Thesis Submitted In Partial Fulfillment for the
Requirement of MSc Degree in Clinical Anatomy

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I am heartly thankful to my supervisor, Dr. Mohammed A.Abuelnor , Professor, Altahir Osman, Dr. Kamal Eldin Elbadawi and Dr. waleed for their encouragement, guidance and tight support from the beginning. Such help enabled me to develop and understand the core of this study.

My deep regards and blessings to those who supported me in any respect during completion of this project mainly my family and colleagues (batch one) MSc clinical human anatomy.

DEDICATION

To the Soul of My beloved Parent who Died Last Year. To my colleagues of the anatomy departments all Over the World.

To my students who will remember what they have heard, read and seen.

مستخلص البحث:

إن الغرض من هذه الدراسة هي معرفة متوسطة أقطار شرياني الذراع وأيهما الأكثر شيوعاً في تغذية الذراع.

إن معرفة مختلف متوسطة أقطار شرياني الذراع من أهم العوامل في جراحة وزراعة الشرايين التاجية باستخدام إحدى شرياني الذراع.

الطريقة:

تم إختيار 28 شخص (14 رجل و 14 إمراه) متوسط أعمارهم 30.5 عاماً لهذه الدراسة بطريقة إنتخاب منظمة، وكما تم إعدادهم لتقييم شرياني الذراع باستخدام تقنية الموجات فوق الصوتية الملونة بعد إراحتهم في السرير لعشر دقائق كاملة . ليس هناك أي مخاطر على المريض يمكن حدوثها عند إستخدام تقنية الموجات فوق الصوتية الملونه، وكما تم أخذ إذن من المرضى لأغراض أخلاقيات البحث.

النتائج:

أظهرت الدراسة بأن متوسط قطرى الشريان الكعبري الأيمن و الأيسر 2.5 ملم بإنحراف معياري قدره 0.39 و 2.4 ملم بإنحراف معياري قدره 0.41 ملم على التوالي، أما متوسط قطرى الشريان الزندي الأيمن و الأيسر فقد كان 2.1 ملم بإنحراف معياري قدره 0.41 و 2.2 ملم بإنحراف معياري قدره 0.43 على التوالي، وأن الشريان الكعبري الأيمن كان الأكثر شيوعاً في تغذية الذراع.

المناقشة:

ليس هناك إختلافات جذرية كبيرة بين متوسطات أقطار شريانى الذراع الأيمن والأيسر ويعزى ذلك لأن أغلب العينات المنتقاة كانت من الطبقة المتعلمة وأكثرها إستخداماً لليد اليمنى أكثر من اليسرى.

ABSTRACT:

The aim of this study is to describe the appearance of radial and ulnar arteries diameter by mean values and to determine the possible dominance arterial supply in radial or ulnar arteries. Knowledge of the different diameters of forearm vessels is one of the most important factors in coronary bypass surgery and radial artery conduit.

Methodology:

28 individuals (14 male, 14) females with mean age 30, 5 years \pm 5, 5 selected systematically by systematic sample technique. Patient prepared for arterial evaluation by using color Doppler Ultrasound after 10 minutes rest on a couch.

There was no hazard affecting the patients when using color Doppler ultrasound.

All patients have informed consent for ethical clearance.

Results:

The mean diameter of right and left radial arteries was $(2.5 \pm .39)$ SD was (2.4 ± 0.41) SD mm, $(2.1 \pm .29)$ SD mm respectively, and right, left ulnar arteries diameter was $(2.4 \pm .41)$ SD mm, $(2.2 \pm .43)$ mm respectively.

The dominant arterial supply was right radial artery.

Discussion:

There was no wide variation in mean diameter between radial and ulnar arteries in both hands due to most samples were for educated using their right hand rather than left. Subsequently, the dominant arterial supply of hand was right radial artery.

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LIST OF ACRONYMS AND ABBREVIATIONS:

BMI:Body Mass Index.

BSA:Body Surface Area.

CABG:Coronary Artery Bypass Graft.

LAD:Left Anterior Descending Artery

RRA:Right Radial Artery

RRAID:Right Radial Artery Internal Diameter

RRAD:Right Radial Artery Dominant

LRAD:Left Radial Artery Dominant

RUAD:Right Ulnar Artery Dominant

LUAD:Left Ulnar Artery Dominant

US:Ultrasound

SPSS:Statistical Packaged of Social Science

P.Value:Probability Value.

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