بسم الله الرحمن الرحيم

قال تعالى:) (رب أشرح لي صدري وبسر أمري وأحلل عقدة من لسانى يفقهوا قولي
صدق الله العظيم

سورة طه الآيات(28-25)
Dedication

To the soul of my parents.
    To my great sister.
    To my Colleges.
    To my teachers.
    To my friends.
Acknowledgment

I do appreciate the continuous help of Dr. Elsafi Ahmed Abdalla for his supervision and encouragement.

I would like to thanks Dr. Mohammed Elfadil for his help especially while doing the analysis of the data.

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I will not forget to extend my great thanks to all my friends and colleagues who supported me and prayed for my success.
Abstract

Infertility is one of the most common diseases in Sudan. This research was done in College of Radiological Sciences and technology (u/S department).

The main objective of this research was to estimate the role of colour Doppler ultrasound (u/s) in evaluating uterine artery blood flow of infertile patients.

In this research 31 female infertile patients were studied, using transabdomenal and color Doppler ultrasound to study the uterine artery Doppler indices pulsatility index, resistive index and peak systolic to end diastolic ratio (RI, PI, PS/ED). These indices were compared relative to patient age, duration of infertility and size of the uterus. These findings were compared with control group.

The researcher concluded that, there is a significant difference in pulsatility index and resistive index (RI, PI) of infertile patients and normal fertile women, but in peak systolic to end diastolic ratio (PS/ED) the difference was in conclusive.
مستخلص البحث

يعتبر العقم واحداً من الأمراض الشائعة في السودان.

أجري هذا البحث الذي يهتم بمسألة العقم في قسم الموجات فوق الصوتية لكلية علوم الأشعة. وكان الهدف منه تقييم دور الدوبلر في الشريان الرحمي لدى مرضى العقم.

وقد قامت الباحثة بإجراء فحوصات على عدد 31 مريضه باستخدام طريقة الموجات الصوتية البطنية والملونه (دوبلر)، لتصوير مؤشرات الدوبلر للشريان الرحمي (PI, RI, PS/ED).

وقد تمت مقارنة هذه المؤشرات مع الأعمار النسبية للمريضات ومدة العقم وحجم الرحم. وأخيراً تمت مقارنة النتائج المتحصل عليها مع نفس النتائج بالنسبة للمريضات في مجموعة الضبط. وقد خلصت الباحثة إلى أن هناك فرقة مهماً بالنسبة لمؤشرات الدوبلر (RI, PI) بين النساء المصابات بالعقم والنساء غير المصابات. أما بالنسبة لمؤشر PS/ED فلا يوجد فرق قاطع.
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Abbreviations

US : Ultrasound.
RI : Resistive Index.
PI : Pulsatility Index.
PS/ED : Peak Systolic to End Diastolic Ratio.
r : Correlation co-efficient
p : Probability
S : Standard Deviation.
TAS : Trans abdominal scanning.
EVS : Endovaginal scanning.