

الايه

قال تعالى

(يرفع الله الذين ءامنو منكم والذين اوتوا العلم درجات والله بما تعملون خبير )

صدق الله العظيم

سوره المجادله الايه (11)

## **Dedication**

To my parents .....

To my family .....

To my sweet daughter Mona Mohammed Alfateh

To everyone who helped and supported me.....

## **Acknowledgement**

Sincere thanks and most grateful appreciation are owed To my supervisor Dr: Babiker Abd El wahab Awad Allah for his good guidance and helping in this, also for sharing me wide knowledge to assist me in learning and practicing of ultrasound.

My thanks extend to anyone who helps me for completing this study, with his full patience and cooperation.

## Abstract

This across-sectional retrospective study aimed to evaluate of pancreas in diabetic patients type-II using ultrasonography carried out in different Khartoum hospitals and conducted during the period from February up to May 2017.

There were 50 cases (25 patient normal as control group and 25 patient had diabetic type II) male and female all patient had aged between 25 and 69 free of diabetic or had diabetic type II; any patient had diabetic type I was excluded from this study. we've had scanned transabdominally using Semen's ultrasound machine of curvilinear transducer(3.5Mhz) to evaluate changes in pancreatic size and the effect of duration of diabetic on diabetic patient using ultrasound compare with healthy patient. Data was collected using data collecting sheet designated to evaluate patient age, duration of diseases, echogenesity of pancreas, and wall of pancreas, mass found in pancreas and measurement of head, neck, body and tail of pancreas And analyze this information Using statistical package for social science.

Study found that there are significant strong inverse relationship between the pancreatic size and the duration of diabetic which the head decreased by 0.0368, the neck decreased by 0.0417 cm per year while the body decrease by 0.0366 cm per year, and the tail decrease by 0.0320 cm per year.

Study concluded that the diabetic patient usually include hyperechoic pattern, irregular out line, with or without presence of classification.

Study recommended that ultrasound scanning should be done routinely for any patient with diabetic in type-II to help the specialist to follow-up the patient treatment plan.

## ملخص البحث

هذه الدراسة المقطعية الوصفية تهدف لمعرفة التغيرات المصاحبة لمرض السكري النوع الثاني في البنكرياس باستخدام تقنيه التصوير بالموجات فوق الصوتيه في عده مستشفيات داخل ولايه الخرطوم في الفتره من شهر فبراير الى شهر مايو لعام 2017.

في هذه الدراسة خمسون عينه ( خمسہ وعشرين من مرضى السكري وخمس وعشرين من مجموعه غير مصابه بالسكري ) من النساء والرجال تتراوح اعمارهم بين 25 ال 68 من المرضى الغير مصابين بمرض السكري او المصابين بمرض السكري من النوع الثاني حيث تم استبعاد المرضى المصابين بالسكري من النوع الاول. كل هؤلاء المرضى فحصو البطن عن طريق الموجات فوق الصوتية باستخدام مساحات سيمنس واي ساوتيه بمجسات ذات قدره 3.5 ميغاهيرتز لتقييم البنكرياس لدى الاشخاص المصابون بالسكري من النوع الثاني ودراسه تاثير فتره المرض على حجم البنكرياس. تم تصميم ورقه جمع البيانات تحتوي على تقييم العمر, الفتره الزمنيه للمرض, كثافه البنكرياس, جود تكتلات في البنكرياس, تقييم جدار البنكرياس وقياس حجم رأس و عنق وجسم وذيل البنكرياس وتم تحليل البيانات وباستخدام برنامج التحليل الخطي التمييزي .

وجدت الدراسه ان هناك علاقه عكسيه بين حجم البنكرياس وبين فتره ظهور مرض السكري وبين حجم البنكرياس وعمر المريض كما ان الجنس لا يؤثر على حجم البنكرياس للمصابين بمرض السكري او الاصحاء . وجد ان حجم راس البنكرياس يقل بمعدل 0.0368 لكل عام, وحجم عنق البنكرياس يقل بمعدل 0.0417 لكل عام, وحجم جسم البنكرياس يقل بمعدل 0.0366 كما ان حجم الذيل بالنسبه للبنكرياس يقل بمعدل 0.320.

الدراسه تضمنت ان مرضى السكري لديهم توهين عالي للبنكرياس وعدم انتظام جدار البنكرياس وقد يكون هنالك كتل في البنكرياس او لا. كما استبعدت الدراسه المرضى بالسكري دون عمر العشرين.

كما اوصت الدراسه بالفحص الدوري للمصابين بمرض السكري من النوع الثاني لتسهيل عمليه المتابعه الدوريه المنتظمه ولتسهيل وضع خطه العلاج بالنسبه للطبيب المختص.

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## **List of Abbreviations**

DM Diabetes Mellitus.

IDDM Insulin Dependent Diabetes Mellitus.

MHz Megahertz.

NIDDM Non Insulin Dependent Diabetes Mellitus.

NPO Nothing by Mouth.

SPSS Statistical Package for Social Science.

U\S Ultra Sound.