

بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

قَالَ تَعَالَى : ( وَإِنْ تَعْدُوا نِعْمَةَ اللَّهِ لَا  
تُحْصِّنُوهَا إِنَّ اللَّهَ لَغَفُورٌ رَّحِيمٌ )

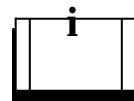
صدق الله العظيم

سورة النحل- آية رقم 18

## Dedication

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*To my beloved parents*



*Who always open  
Their hearts to  
offer their love and support  
To my brothers and sisters  
My candle lights  
I dedicate this humble work*

## **Acknowledgement**

*I would like to thank the almighty Allah  
for giving me the strength and stamina to  
accomplish this work.*

*I would like to express my gratitude and appreciation to my supervisor Prof/ Mohammed Abdelrahim , who has given me much of his time for suggestion and supervision of this work.*

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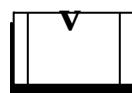
*All thanks are due to them and to everyone lent a hand to make this work possible.*

## **Abstract**

A cross-sectional study conducted during the period from February to May 2011 in Gezira Renal Disease and Surgery Hospital, Medani. Eighty blood samples were collected from 80 Chronic Renal Failure (CRF) patients and 30 blood samples were collected from apparently healthy individuals as a control group.

Calcium, phosphorus, creatinine and urea serum levels were measured for test and control group using Accent 2000 analyzer. The obtained results of test group were compared with control group to be acquainted with the effect of chronic renal failure on the above biological parameters. And then the mentioned biological parameters were correlated among the test group.

It is found that the serum phosphate , creatinine and urea levels were significantly raised, whereas serum calcium level was no significance difference between control and test group .



Equally important to mention that positive correlation was observed between urea and creatinine and also with phosphorus. Calcium was only correlated negatively with urea and show no any correlation with the rest of the parameters where as phosphorus only correlated positively with creatinine and urea and no any correlation with the rest of the other parameters.

Sex and age were not correlated with any of the parameters tested in this study.

## مستخلص

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أجريت دراسة تقاطعية فى الفترة من فبراير و حتى مايو 2011 فى مستشفى الجزيرة لامراض و جراحة الكلى بمدينة ودمدنى ، حيث استهدفت الدراسة 80 فرد من مرضى الفشل الكلوى المزمن كمجموعة للدراسة حيث جمعت 80 عينة دم منهم و ايضاً ضمت الدراسة 30 فرد من الاصحاء جمعت منهم 30 عينة دم كمجموعة مرجعية.

تم قياس مستويات الكالسيوم و الفسفور و البولينا و الكيراتينين فى امصال مجموعة الدراسة و المجموعة المرجعية بأسخدام جهاز محلل اكسنت 2000.

و تمت مقارنة النتائج المتحصل عليها من مجموعة الدراسة مع نظيراتها فى المجموعة المرجعية و ذلك للتتعرف على اثر مرض الفشل الكلوى المزمن على المقاييس الحيوية بعاليه، و من ثم تمت دراسة ارتباط هذه المقاييس الحيوية ضمن مجموعة الدراسة .

و قد وجد ان مستويات الفسفور و الكيراتينين و البولينا مرتفعة بصورة واضحة فى امصال مجموعة الدراسة بينما لم توجد

فروقات ذات دلالة معنوية في مستوى الكالسيوم بين المجموعة المرجعية و مجموعة الدراسة.

ووجد ان هنالك ارتباط ايجابي بين البولينا والكرياتينين والفسفور. ووجود ارتباط سلبي للكالسيوم مع البولينا ولم يظهر الكالسيوم اي ارتباط مع المقاييس الحيوية الاخرى بينما اظهر الفسفور ارتباط ايجابي فقط مع الكيراتينين و البولينا ولم يظهر اي ارتباط مع المقاييس الحيوية الاخرى.

لم يظهر عامل العمر و الجنس اي ارتباط مع اي من المقاييس الحيوية المذكورة في هذه الدراسة.

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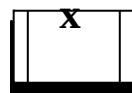
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