



**UNIVERSITY OF TRIPOLI ALAHLIA
DEPARTMENT OF MEDICAL LABORATORIES**

PROJECT TITLE

**THE EFFECT OF DIALYSIS ON BLOOD GLUCOSE
LEVEL OF RENAL FAILURE PATIENTS**

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THE EFFECT DIALYSIS ON BLOOD GLUCOSE LEVEL OF
RENAL FAILURE PATIENTS

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A project submitted in fulfilment of the requirement for the degree
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ABSTRACT

Background and objectives: In patients with diabetes receiving chronic haemodialysis, both very high and low glucose levels are associated with poor outcomes, including mortality. Conditions that are associated with an increased risk of hypoglycaemia in these patients include decreased gluconeogenesis in the remnant kidneys, deranged metabolic pathways, inadequate nutrition, decreased insulin clearance, glucose loss to the dialysate and diffusion of glucose into erythrocytes during haemodialysis. The study targeted the evaluation the effect of haemodialysis on blood glucose in renal failure patients at Janzur dialysis centre in Janzur city during 2018. **Methods:** Across sectional descriptive study, conducted at Janzur dialysis centre during 2018 that aimed to estimate blood glucose in renal failure during haemodialysis. A total of 102 sample was collected from renal failure patients in hospital. **Results:** the mean of glucose is lower in post haemodialysis in both known and unknow diabetic patients [140, 98.2 mg/dl, respectively] in compare to the mean of glucose in pre haemodialysis [159, 106 mg/dl, respectively]. For all individuals, mean of all post dialysis electrolyte parameters have been decreased. **Conclusion:** the level of blood glucose and electrolyte levels in renal failure patients is decrease post haemodialysis, which means there is a clear effect of haemodialysis on both blood glucose and electrolyte levels.

KEYWORDS: Haemodialysis – Renal Failure – Diabetes.

الملخص

الخلفية والأهداف: في مرضى السكري الذين يتلقون غسيل الكلى المزمن ، ترتبط مستويات الجلوكوز المرتفعة والمنخفضة جدًا بالنتائج السيئة ، بما في ذلك الوفيات. الحالات التي ترتبط بزيادة خطر نقص السكر في الدم لدى هؤلاء المرضى تشمل انخفاض السكر في الكلى ، ومسارات التمثيل الغذائي المختل ، وعدم كفاية التغذية ، وانخفاض إزالة الأنسولين ، وفقدان الجلوكوز في غسيل الكلى والجلوكوز في كريات الدم الحمراء أثناء غسيل الكلى. استهدفت الدراسة تقييم تأثير غسيل الكلى على نسبة الجلوكوز في الدم لدى مرضى الفشل الكلوي في مركز غسيل الكلى جنزور في منطقة جنزور خلال عام 2018. **الطريقة:** عبر دراسة وصفية مقطعية ، أجريت في مركز جنزور لغسيل الكلى خلال عام 2018 والتي تهدف إلى تقدير نسبة الجلوكوز في الدم في الفشل الكلوي خلال غسيل الكلى. تم جمع 102 عينة من مرضى الفشل الكلوي في المستشفى. **النتائج:** يكون متوسط الجلوكوز أقل في غسيل الكلى في كل من مرضى السكري المعروفين وغير المعروفين [140 ، 98.2 ملغ / دل ، على التوالي] بالمقارنة مع متوسط الجلوكوز في غسيل الكلى السابق [159 ، 106 ملغ / دل ، على التوالي]. بالنسبة لجميع الأفراد ، انخفض متوسط جميع معلمات المنحل بالكهرباء. الخلاصة: إن مستوى السكر في الدم ومستويات الإلكتروليت لدى مرضى الفشل الكلوي هو انخفاض في غسيل الكلى ما بعد ، مما يعني أن هناك تأثير واضح من غسيل الكلى على كل مستويات السكر في الدم والكهارل.

الكلمات الرئيسية: غسيل الكلى - الفشل الكلوي - مرض السكري.

APPROVAL PAGE

I certify that I have supervised and read this study and that in my opinion it conforms to acceptable standards of scholarly presentation and is fully adequate, in scope and quality, as a project for the degree of Bachelor of Medical Laboratories.

.....
Abdulwahab Aldeeb
Supervisor

I certify that I have read this study and that in my opinion it conforms to acceptable standards of scholarly presentation and is fully adequate, in scope and quality, as a project for the degree of Bachelor of Medical Laboratories.

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Abdulsalam Rfaida
Examiner

This project was submitted to the Department of Medical Laboratories and is accepted as partial fulfilment of the requirements for the degree of Bachelor of Medical Laboratories.

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This Project was submitted to the department of Medical Laboratories and is acceptable as partial fulfillment of the requirements for the degree of Bachelor of Medical Laboratories.

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Dean, University of Tripoli
Alahlia

DEDICATION

Praise be to Allah who helped us to this and we would not have reached him if God did not favor us.

In spite of the difficulties that we have been through, we have finished my study. I dedicate my graduation project to my family who were helpful and support. I also thank all those who helped me to complete my education and thank my teaching staff.

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