

Dedication

To

My

Family

Declaration

This research was carried out by the undersigned at the Sudan University of Science & Technology. Sudan during the period of October 2003 – 2004 and was not submitted for any degree before.

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Dr. Mohammed Abd Elraheem.....

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ABSTRACT

This study was carried out on 63 patients (41 males, 22 females) with end stage renal disease (ESRD) aged from 14 to 74 years and were on haemodialysis. All patients were seen at Dr. Salma center for renal dialysis and transplantation (Khartoum).

Glucose concentration was measured pre and post haemodialysis in the blood of all patients in order to study the influence of the renal haemodialysis on the concentration of blood glucose and to assess if there was any change and to predict suitable precautions that might be taken so as to avoid the risk of that change accompanied the renal haemodialysis.

The preliminary investigations revealed that most of the end stage renal disease patients were presented with other disease, namely hypertension, diabetes mellitus, renal stones, hepatitis (HBV) and tuberculosis (TB).

The findings of this study showed that the level of blood glucose concentration of the majority patients changed after the session of haemodialysis, most of this change was reduction in the concentration of glucose.

The findings also revealed that age had no impact on the level of blood glucose pre- and post haemodialysis. It is obvious from this study, that the blood glucose should be estimated before the initiation of the session of the haemodialysis so as to avoid the risk of hypoglycemia.

The study also revealed that both males and females showed overall reduction in the concentration of their blood glucose post haemodialysis

with slight tendency to reduction in female compared with male .(male p=0.004) (female p=0.012).

The findings also revealed that the age intervals had no impact on the difference in blood glucose pre- and post haemodialysis.

It is obvious from this study that the estimation of blood glucose should be done for all ESRD patients (diabetic and non diabetic) before and after the session of haemodialysis and their blood glucose should be adjusted within the normal range.

The findings of this study showed that the level of blood glucose concentration of the majority of patients changed after the session of haemodialysis most of this change was reduction in the concentration of blood glucose. This occurred in spite of that the dialysis solution in the dialysis machine, which was responsible for the withdrawal of waste products was treated so as to avoid any undesirable change in blood glucose. Both diabetic and non diabetic are prone to hypoglycemia post haemodialysis. So checking and monitoring their blood glucose is very vital for their lives

اجريت هذه الدراسة على 63 مريضا (41 من الذكور و 22 من الاناث) تتراوح اعمارهم بين 41-74 سنه من مرضى الفشل الكلوى والذين يجرون الغسيل الكلوى الدموي. تمت م قابلة كل المرضى فى مركز د سلمى سليمان لغسيل وزراعة الكلى بالخرطوم اوضحت الفحوصات الاولية ان غالبية مرضى الغسيل الكلوى يعانون من امراض اخرى مصاحبة مثل ارتفاع ضغط الدم حصاوى الكلى مرض السكري التهاب الكبد الفيروسى والدرن.

تم قياس تركيز الجلوكوز قبل وبعد اجراء الغسيل الدموي فى دم كل المرضى من اجل دراسة تاثير الغسيل الكلوى الدموي على تركيز الجلوكوز فى الدم ومعرفة ما اذا كان هناك اي تغير وذاك لوضع الاحتياطات المناسبة والتى من المحتمل انخاذها لتفافى اى خطورة قد تترجم من ذاك التغير المصاحب لعملية الغسيل الكلوى الدموي.

اوضحت نتائج الدراسة ان مستوى تركيز الجلوكوز فى دم معظم المرضى حدث له تغير بعد الغسيل الدموي واغلب التغيير كان انخفاضا فى مستوى تركيز الجلوكوز فى الدم وهذا يحدث رغم ان محلول الغسيل الموجود ذى ماكينة الغسيل والمسئول عن سحب المواد الضارة بالجسم معالج بحيث يتم تلافى اى تغير غير مرغوب فى جلوكوز الدم. اوضحت الدراسة ايضا ان كلا الجنسين ذكور واناث اظهروا انخفاض فى تركيز الجلوكوز فى الدم بعد الغسيل الدموي مع قليل من القابلية للانخفاض عند الاناث مقارنة بالذكور الاحتمالية للذكور ($p=0.0004$) وللإناث ($p=0.012$) .

كما اوضحت الدراسة ان الفئات العمرية ليس لها تاثير على الفرق فى مستوى الجلوكوز قبل وبعد الغسيل الدموي ، يتضح من هذه الدراسة ان قياس الجلوكوز فى الدم يجب ان يجرى على كل مرضى الغسيل الكلوى (مرضى السكري وغير مرضى السكري) قبل الغسيل الدموي ويجب ان يضبط الجلوكوز فى دمهم ضمن مستوى الطبيعي الذين يعانون من مرض السكري والذين لا يعانون منه عندهم القابلية للتعرض لانخفاض مستوى السكر فى الدم لذاك فان فحص وضبط الجلوكوز فى دمهم امر هام جدا للحياة.

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