Sudan University of Sciences and Technology
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The Value of Plasma Uric acid, Urea, Creatinine and Electrolytes in Diagnosis of Pre-eclampsia

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B.Sc in Medical Laboratory Sciences

A thesis Submitted for Partial fulfillment of the Requirement for the Degree of M.Sc in Clinical Chemistry

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October 2005

Dedication

To my parents, wife and lovely son, to whom I shared my joyful life and were very kind.

I give this work as a gift to all of you.

Acknowledgement

SOME WORDS OF THANKS

While doing this research, I gained a strong appreciation of this fact, I couldn’t do it without the help of many talented, dedicated peoples.

While I cannot possibly thank all of them here, I do wish to express my appreciation to those who help has been most valuable.

My Sincere thanks to:

- My supervisor Dr, Moawia Hussien Elobeid
- Dr. Adam Saleh
- Dr, Mohamed Bahaaldeen
- Dr. Solafa Alradi

To all truly outstanding people, and to many others, I give my warmest personal regards and thanks

Abstract

A prospective study conducted during the period of March 2005 to October 2005 to evaluate some of the renal functions in preeclamptic toxemia of pregnancy by measuring blood urea, creatinine, uric acid and electrolytes (Na^+, K^+). The population of the study includes 25 apparently healthy pregnant women and 50 pregnant ladies proved to have preeclamptic toxemia. Blood samples were taken and plasma was separated. Urea, creatinine, uric acid, sodium and potassium were determined. The result obtained for both groups were statistically analyzed using 't' test correlation.

The result obtained from this study showed that there were significant difference between uric acid levels in normal pregnancy and preeclamptic pregnant women (mean difference 3.4 mg/dl and $P < 0.05$) while in urea, creatinine, sodium and potassium there were no significant differences ($P > 0.05$). Uric acid measurement showed that there was a correlation between preeclampsia and uric acid level in blood. Complete renal damage was found to be very rare.

أجريت هذه الدراسة خلال الفترة من مارس 2005 م وحتى اكتوبر 2005 م بغرض ت قييم بعض وظائف الكلى في حالة التسمم الإرتعاجي لحالات الحمل وذلك بـ قياس نسبة البولينا, الكرياتينين, الحمض البولي والكهارل (الصوديوم و البوتاسيوم) في الدم. يشمل مجتمع الدراسة 25 من الحوامل يتمتعون بصحة كاملة و 50 من الحوامل اثبت اكلينيكيا أنهم يعانون من حالة التسمم الإرتعاجي. أخذت منهم عينة الدم وتم فصل البلازما ثم تم قياس كل من البولينا, الكرياتينين, الحمض البولي والكهارل, و قد تم تحليل هذه النتائج (إحصائيا باستعمال اختبار (ت

أوضحت النتائج أنه يوجد اختلاف ذو معنى واضح في نتائج الحمض البولي بين المجموعتين (متوسط الفرق 3.4مل جرام/دسل و قيمة فرضية الإحتمال الإحصائي أ قل من 0.05).

كما أوضحت النتائج أنه لا يوجد اختلاف إحصائي ذو معنى واضح بالنسبة لليوريا, الكرياتينين, الصوديوم والبوتاسيوم بين المجموعتين (فرضية الإحتمال أكثر من 0.05).

أوضح قياس الحمض البولي أن هنلك توافق بين حالة التسمم الإرتعاجي في الحمل و قيمة الحمض البولي في الدم. كما أوضحت الدراسة أن حالات الفشل الكلوي التام نادرة جدا.

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