

بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

قال تعالى:

اَفَرَأَ يَا سَمِّ رَبِّكَ الِّذِي خَلَقَ (1) خَلَقَ اَلْإِنْسَانَ
مِنْ عَلَقٍ (2) اَفَرَأَ وَرَبِّكَ الْاَكْرَمُ (3) الِّذِي عَلِمَ
بِالْقَلْمَ (4) عَلِمَ اَلْإِنْسَانَ مَا لَمْ يَعْلَمْ (5)

صدق الله العظيم

سورة العلق- الآيات (١ الى ٥)

Dedication

To my father who
taught me how to feel
the pain of others, to
my mother who spends
her life for us, to my
teachers, colleagues
and friends and to all
patients with chronic
renal failure I dedicate
this work.

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ABSTRACT

Chronic renal failure is one of diseases that may cause mortality. Patients with chronic renal failure requires certain laboratory investigations including for example: urea, creatinine and electrolytes.

Magnesium is one of the electrolytes that may be of importance in the management of these conditions and may help the nephrologists for treatment and follow up.

This case-control and cross-sectional study was carried out at renal unit of Omdurman military hospital in Khartoum state, to measure the plasma magnesium level in Sudanese's patients with chronic renal failure (CRF) during the period from November 2009 to march 2010.

Forty patients with CRF (pathological group) and 40 apparently healthy individuals as (control group) were included in this study.

Results showed that there was a significant difference between the means of plasma magnesium levels of the patients group ($n=40$) and the control group ($n=40$). Mean \pm SD: (0.974 ± 0.172) versus (0.763 ± 0.129) mmol/l, ($P= 0.00$)

Results showed that there was no significant difference between the means of plasma magnesium levels of the males ($n=27$) and the females ($n=13$) in the patients group. Mean \pm SD: (1.0 ± 0.14) versus (0.92 ± 0.22) mmol/l, ($P= 0.18$)

Results showed that there was no significant difference between the means of plasma magnesium levels of the males (n=26) and the females (n=14) in the control group. Mean \pm SD: (0.75 \pm 0.12) versus (0.79 \pm 0.14) mmol/l, (P= 0.37)

Results showed that there was a significant difference between the means of plasma magnesium levels of the patients males group (n=27) and the control males group (n=26). Mean \pm SD: (1.0 \pm 0.14) versus (0.75 \pm 0.12) mmol/l, (P= 0.00)

Results showed that there was no significant difference between the means of plasma magnesium levels of the patients females group (n=13) and the control females group (n=14). Mean \pm SD: (0.92 \pm 0.22) versus (0.79 \pm 0.14) mmol/l, (P= 0.07)

In conclusion this study found that Plasma magnesium level was found to be significantly increased in chronic renal failure and the change in plasma magnesium level was not affected by gender.

ملخص الدراسة

الفشل الكلوي المزمن هو من الامراض التي يمكن ان تؤدي الى الموت. المرضى بالفشل الكلوي يحتاجون لعدة فحوصات معملية تشمل علي سبيل المثال: البولينا، الكرياتينين، والمنحلات بالكهرباء.

الماغنيسيوم هو احد المنحلات بالكهرباء ويمكن ان يكون علي درجه من الأهمية في تقييم هذه الحالات ويمكن ان يساعد الاطباء في العلاج والمتابعة.

هذه دراسه تحليليه مقطعيه وصفيه أجريت في وحدة الكلي بالسلاح الطبي بامدرمان بهدف قياس معدل الماغنيسيوم في الدم لدى سودانيين مصابين بمرض الفشل الكلوي المزمن في الفترة من نوفمبر للعام 2009 وحتي مارس للعام 2010 .

شملت الدراسة 40 مريضا بالفشل الكلوي المزمن و 40 شخصا صحيحا تم اختيارهم للدخول في هذه الدراسة وكانت النتائج كالتالي:

اظهرت النتائج ان هنالك فرق ذو دلاله احصائيه بين متوسط معدل الماغنيسيوم في الدم لدى المرضى بالفشل الكلوي $\text{Mean} \pm \text{SD}$: (0.974 ± 0.172)

الاصحاء (Mean \pm SD: 0.763 ± 0.129) حيث كانت الاحتماليه (P=0.00).

اظهرت النتائج انه لا يوجد فرق ذو دلاله احصائيه بين متوسط معدل الماغنيسيوم في الدم لدى الرجال المرضى وعددتهم 27 (Mean \pm SD: 1.0 ± 0.14) ومتوسط معدل الماغنيسيوم في الدم لدى النساء المرضى وعددتهم 13 (Mean \pm SD: 0.92 ± 0.22) حيث كانت الاحتماليه (P=0.18).

اظهرت النتائج انه لا يوجد فرق ذو دلاله احصائيه بين متوسط معدل الماغنيسيوم في الدم لدى الرجال الاصحاء وعددتهم 26 (Mean \pm SD: 0.75 ± 0.12) ومتوسط معدل الماغنيسيوم في الدم لدى النساء الاصحاء وعددتهم 14 (Mean \pm SD: 0.79 ± 0.14) حيث كانت الاحتماليه (P=0.37).

اظهرت النتائج انه يوجد فرق ذو دلاله احصائيه بين متوسط معدل الماغنيسيوم في الدم لدى الرجال المرضى وعددتهم 27 (Mean \pm SD: 1.0 ± 0.14) ومتوسط معدل الماغنيسيوم في الدم لدى الرجال الاصحاء وعددتهم 26 (Mean \pm SD: 0.75 ± 0.12) حيث كانت الاحتماليه (P=0.00).

اظهرت النتائج انه لا يوجد فرق ذو دلاله احصائيه بين متوسط معدل الماغنيسيوم في الدم لدى النساء المرضى وعددتهم 13 (Mean \pm SD: 0.92 ± 0.22) ومتوسط معدل الماغنيسيوم في الدم لدى النساء الاصحاء وعددتهم 14 (Mean \pm SD: 0.79 ± 0.14) حيث كانت الاحتماليه (P=0.07).

في خلاصة هذه الدراسة وجد ان معدل الماغنيسيوم في الدم يكون مرتفعا لدى مرضى الفشل الكلوي المزمن بالإضافة الى ذلك وجد ان معدل الماغنيسيوم في الدم لا يتأثر بال النوع.

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