

الآية

قال تعالى:-

﴿ اقْرَأْ بِاسْمِ رَبِّكَ الَّذِي خَلَقَ ﴾ 1 ﴿ خَلَقَ الْإِنْسَانَ مِنْ عَلَقٍ ﴾ 2 ﴿ اقْرَأْ وَرَبُّكَ

الْأَكْرَمُ ﴾ 3 ﴿ الَّذِي عَلَّمَ بِالْقَلَمِ ﴾ 4 ﴿ عَلَّمَ الْإِنْسَانَ مَا لَمْ يَعْلَمْ ﴾ 5

صدق الله العظيم

سورة العلق الآيات (1-5)

DEDICATION

To my mother

The love and kindness umbrella

To my father

The sacrifice and giving and my support in life

To all my lovers

To all patients sufferinig from renal failure

Ilay this humble work

Bahia

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ABSTRACT

This is cross-sectional descriptive study was carried out at Military Hospital at Aref center of dialysis , to measure complete blood count of patients with chronic renal failure under haemodialysis , to detect the effect of haemodialysis duration on complete blood count and to determine the type of anaemia which found in patients with CRF.

70 sample were collected from patients with CRF , also 50 sample collected from apparently healthy pepoles as acontrol , 2.5 ml of blood was collected from patients and controls , automated haematological analyzer (sysmex KX- 21N) was used to measure complete blood count .Informative demographic data of sex , age , duration and other disease were collected in the questionnaire

The result showed that the haemoglobin mean value of patients with CRF was $8.1\text{g/dl} \pm 2.2$, mean value of MCV, MCH , MCHC were $91\text{fl} \pm 5.9$, $27\text{pg} \pm 2.3$, $29\text{g/dl} \pm 2.0$ respectively PCV was $27\% \pm 6.9$, leucocyte count ,red cells and platelets count were $4.8 \times 10^9\text{L} \pm 2.7$, $2.9 \times 10^{12} \text{L} \pm 0.8$ and $190 \times 10^9\text{L+B} \pm 96.8$ respectively . Age in this study was divided into three groups 15-30 , 31-45 and 46-75. There was no relationship between age group and Hb , RBCs count and PCV level , also there was no significant difference in Hb , PCV and RBCs count according to sex.

The study conclude that the duration of haemodialysis does not affect Hb , RBCs and PCV .The most common type of anaemia in patients with chronic renal failure was normocytic normochromic anaemia (86%) and (14%) was microcytic hypochromic anaemia.

مستخلص البحث

هذه دراسة مقطعية وصفية تم اجراؤها بمستشفى السلاح الطبي بمركز عارف للاستشفاء الدموي لقياس تعداد الدم الكلي لمرضي الفشل الكلوي المزمن الخاضعين للغسيل الكلوي ولتحديد اثر فترة الغسيل علي تعداد الدم الكلي وايضا تحديد نوع الانيميا عند مرضي الفشل الكلوي المزمن . تم اخذ 70 عينة دم من مرضي يعانون من الفشل الكلوي المزمن و50 عينة تم اخذها من اشخاص اصحاء كمجموعة ضابطة وجمع 2.5 مل من الدم من المرضي والاصحاء واستعمل المحلل الاتوماتيكي (sysmex KX- 21N) لقياس تعداد الدم الكلي وتم جمعها من خلال استبيان المعلومات الديموقرافية حول الجنس، العمر، فترة الغسيل ووجود امراض اخري مصاحبة للفشل الكلوي.

نتيجة الدراسة اشارت الي ان متوسط قيمة الهيموقلوبين لمرضي الفشل الكلوي المزمن كان 8.1 ± 2.2 ومتوسط قيم معدلات الدم متوسط حجم الخلية، متوسط هيموقلوبين الخلية ومتوسط تركيز الهيموقلوبين بالخلية الواحدة وعلي التوالي كان: 29 ± 2.0 pg , 27 ± 2.3 fl , 91 ± 5.9 و متوسط قيمة الهيمتوكريت كان $27 \pm 6.9\%$ واوضحت ان معدل تعداد كريات الدم البيضاء $4.8 \pm 2.7 \times 10^9$ وقد كان تعداد كريات الدم الحمراء والصفائح الدموية علي التوالي $2.9 \pm 0.8 \times 10^{12}/L$ $190 \pm 96.8 \times 10^9$ وقد قسمت مجموعة الدراسة وفق الاعداد الدراسة الي ثلاث مجموعات هي: 15-30, 31-45, 46-75. وجد انه لا توجد علاقة بين عمر المريض واختلاف قيم الهيموقلوبين، الهيمتوكريت وكريات الدم الحمراء، وانه لا يوجد اختلاف مؤثر في تلك المعدلات تبعا للجنس، وقد اوضحت الدراسة ان فترة الغسيل الكلوي لا تؤثر علي معدلات كريات الدم الحمراء، الهيموقلوبين و الهيمتوكريت وكذلك معظم انواع الانيميا لدي مرضي الفشل الكلوي المزمن هي الانيميا عادية الخلية والهيموقلوبين وذلك بنسبة 86% وقد مثلت الانيميا صغيرة الخلية قليلة الهيموقلوبين 14%.

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LIST OF ABBREVIATIONS

ACD	Anaemia of chronic disease
ARF	Acute renal failure
BUN	Blood urea nitrogen
CBC	Complete blood count
CKD	Chronic kidney disease
CRF	Chronic renal failure
CFU-GE	Colony forminy unit-granulocytes eosinophil
DNA	Deoxyribo nucleic acid
Dr	Doctor
EDTA	Ethyl diamine tetra acetic acid
ESRD	End stage of renal disease
EPO	Erthropietin
ESAs	Erythropietin stimulating agents
GFR	Glomerular filtration rate
Hb	Haemoglobin

IDA	Iron deficiency anaemia
IL	Interlukein
Ka	Kilodalton
MCV	Mean cell volume
MCH	Mean cell haemoglobin
MCHC	Mean cell haemoglobin concentration
NK cell	Natural Killer cells
PCV	Paked cell volume
RBCs	Red blood cells
RPI	Reticulocyte production index
SF	Steel factor
TIBC	Total iron binding capsity
WBCs	White blood cells