بِسْمِ اللّهِ الرَّحْمَنِ الرَّحِيمِ

قال تعالى :

﴿ قَالُواْ سُبْحَانَكَ لاَ عِلْمَ لَنَا إِلاَّ مَا عَلَّمْتَنَا إِنَّكَ أَنتَ الْعَلِيمُ الْحَكِيمُ ﴾

صدق الله العظيم

سورة البقرة الآية 32

Dedication

To my mother

To my father

To my brother… Abd alrahman

To my beloved

engaged

To my sister

To my best frind…Mergani Mergani

To all friends and teachers in my life

To all people making my life

better…

The researcher

Acknowledgement

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The researcher

Abstract

An experimental study conducted during the period October 2008 to March 2009, in ALNAW hospital and KHARTOUM teaching hospital research and laboratory unite. About twenty different pooled plasma were collected from a 80 apparently healthy volunteers, heamolysate was prepared by freezing at -20 over night, serial dilution of haemolysate was prepared (0.125, 0.25, 0.5, 1, 2, 4, 8 g/dl), each pooled plasma was dispense into different 8 tubes (900µl in each tube) and then added 100 µl from different concentration of heamolysate in each tubes except in compare tube (base line) was added 100 µl of distilled water, and then measure plasma AST, potassium and phosphate in each tubes. Plasma level of AST and phosphate were measured using Hitachi 902 Analyzer. Plasma level of potassium was measured using ion selective electrode.

The result showed plasma AST, potassium and phosphate were significantly raised at hemoglobin concentration 0.4 and 0.8 g/dl ($P<0.01$), whereas plasma potassium and AST was significantly increased at hemoglobin concentration 0.1 and 0.2 g/dl ($P<0.01$), the plasma potassium only was significantly increased at hemoglobin concentration 0.05 g/dl ($P<0.05$).

الخلاصة

اجريت هذة الدراسه التجريبيه في الفترة من اكتوبر 2008 الى مارس 2009، في مستشفى النو ووحده الابحاث والمعامل بمستشفى الخرطوم التعليمى . حوالى 20 مجمع مختلف من البلازما جمع من 80 متطوع ظاهريا سليمين. الدم المحلل هُيّأ بالتجميد في -20 ليلاً، حضر تخفيف متسلسل من الدم المحلل (0.125, 0.25, 0.5, 1, 2, 4, 8 جرام/ديسيليتر) .كل مجموع من البلازما وزع الى 8 انابيب مختلفةِ (900µl في كُلّ إنبوب(وبعد ذلك أضيفتْ 100µl مِنْ التراكيزِ المختلفِه للدم المحلل في كُلّ الأنابيب ماعدا إنبوبِ المقارنةِ فى هذا الانبوب أُضيفتْ 100 µl مِنْ الماءِ المُقَطَرِ، وبعد ذلك قِيسُت البلازما AST، بوتاسيوم والفوسفات في كُلّ الأنابيب. مستوى البلازما أي إس تي وفوسفات قِيسا باستعمال Hitachi 902 analyzer . اما مستوى البوتاسيوم فِى البلازما قِيسَ بإستعمال قطب الآيونِ الكهربائي الإنتقائي.

اظهرت النتائج ان مستوى البلازما AST، بوتاسيوم والفوسفات رُفِعا بشكل ملحوظ في تركيزِ هيموغلوبينِ 0.4 و 0.8 جرام/ديسيليتر ($P<0.01$)، بينما مستوى البوتاسيوم و AST زِيدا بشكل ملحوظ في تركيزِ هيموغلوبينِ 0.1 و 0.2 جرام/ديسيليتر ($P<0.01$)، اخيرا فقط مستوى البوتاسيوم فى البلازما زِيدَ بشكل ملحوظ في تركيزِ الهيموغلوبينِ 0.05 جرام/ديسيليتر ($P<0.05$).

LIST OF CONTENTS

List of Abbreviations

AST : Aspartate Aminotransferase

AMI : Acute Myocardial Infartion

CK : Creatine Kinase

GFR : Glomerular filtration rate

GOT : Glutamic Oxaloacetic Transaminase

ECF : Extra cellular fluid

ICF : Intera Cellular Fluied

IV : Intera Venous

K : Potassium

LDH&LD : Lactate dehydrogenase

MD : Malate Dehydrogenase

NAD : Nicotine Amid Dinucleotide

RTA : Renal Tubular Acidosis

SGOT : Serum Glutamic Oxaloacetic Transaminase

LIST OF FIGURES

LIST OF TABLES