

بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

قال تعالى :

﴿ قَالُوا سُبْحَانَكَ لَا عِلْمَ لَنَا إِلَّا مَا عَلَّمْتَنَا
إِنَّكَ أَنْتَ 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

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who helped me to perform this work.

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 هذه الدراسة التجريبيه في الفترة من اكتوبر 2008 الى مارس 2009، في مستشفى النو ووحده الابحات والمعامل بمستشفى الخرطوم التعليمي . حوالى 20 مجمع مختلف من البلازما جمع من 80 متطوع ظاهريا سليمين. الدم المحلل هُيأ بالتجميد في -20 ليلاً، حضر تخفيف متسلسل من الدم المحلل (0.125, 0.25, 0.5, 1, 2, 4, 8 جرام/ديسيلتر). كل مجموع من البلازما وزع الى 8 انابيب مختلفة (900µl في كُلّ إنبوب) وبعد ذلك أُضيفت 100µl من التراكيز المختلفه للدم المحلل في كُلّ الأنابيب ماعدا إنبوب المِ قارنَة فى هذا الانبوب أُضيفت 100 µl من الماء المُ قَطَر، وبعد ذلك قِيسَت البلازما AST، بوتاسيوم والفوسفات في كُلّ الأنابيب. مستوى البلازما اى إس تي وفوسفات قِيسا باستعمال Hitachi 902 analyzer. اما مستوى البوتاسيوم فى البلازما قِيسا باستعمال قطب الايون الكهربائي الإنتقائي.

اظهرت النتائج ان مستوى البلازما AST، بوتاسيوم والفوسفات رُفعا بشكل ملحوظ في تركيز هيموغلوبين 0.4 و 0.8 جرام /ديسيلتر ($P<0.01$)، بينما مستوى البوتاسيوم و AST زيدا بشكل ملحوظ في تركيز هيموغلوبين 0.1 و 0.2 جرام /ديسيلتر ($P<0.01$)، اخيرا فقط مستوى البوتاسيوم فى البلازما زِيدَ بشكل ملحوظ في تركيز الهيموغلوبين 0.05 جرام /ديسيلتر ($P<0.05$).

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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

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