Evaluate Electrolyte Balance and Renal Function in End-Stage Renal Failure Patients with

Hemodialysis

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Chronic kidney disease (CKD) has become a global epidemic with an estimated prevalence of

14% in the United States and 5-15% throughout the world. As the kidneys play a central role in

the regulation of body fluids, electrolytes, and acid-base balance, CKD and ESRD predictably

result in multiple derangements including hyperkalemia, metabolic acidosis.

hyperphosphatemia which, in turn, lead to serious complications including muscle wasting,

bone-mineral disorder, vascular calcification, and mortality. The current study aims to evaluate

some biochemistry parameters in hemodialysis patients, these parameters are selected to

investigate the renal function in end-stage of renal failure via (urea, and creatinine). In addition,

electrolat balance in end-stage of renal failure via (Na, K, Cl, Mg, Phosphorus, Bicarbonate, and

Ca). To arrive at the current goal, Bias control studies are performed on 50 subjects (25 Mans

and 25 Women) of Iraqi patients with CKD at the age range (of 20 - 68 years) in Baquba

teaching hospital in Ibn Sina Center for Dialysis, and 50 healthy subjects as control (25Mans

and 25 Women). All in all, through this study, good indicators for detecting this disease will be

determined

Keywords: Electrolyte balance, Renal Failure, End-stage, Hemodialysis, Bicarb

RESOURCE LIST

Berend, K. de Vries, A. P. & Gans, R. O. 2014. Physiological approach to assessment of

acid base disturbances. New England Journal of Medicine, 371(15), 1434-1445.

Dhondup, T. and Qian Q. 2017. Electrolyte and acid-base disorders in chronic kidney disease

and end- stage kidney failure.Blood purification,43(1-3),179-188.

Lin,J. et al. 2018. Acid-base and electrolyte managements in chronic kidney disease and end-stage renal disease: Case-based discussion. Blood purification, 45(1-3), 179-186

United States Renal Data System: 2015 USRDS Annual Data Report:Epidemiology of Kidney Disease in the United States.Bethesda,National Institutes of Health, 2015. www.usrds.org 2015 view Default.aspx cited October 8, 2016.