

Comparing capillary blood glucose measures with venous blood glucose evaluated by the diabetes unit of the AL-Sadder Hospital, Basra, Iraq. Falah Hassan Shari College of Pharmacy, Al-Basra University, Basra, Iraq Key words: Diabetes Mellitus ; glucose meters and blood glucose. Received (April), Accepted (June)

Abstract:

Diabetes Mellitus is a chronic disease associated with long-term complications, damage, dysfunction, and failure of different organs, including the eyes, kidneys, nerves, heart and blood vessels. Blood glucose monitoring by measuring glucose levels using test strips in home-monitoring or venous blood glucose measuring in laboratory can improve the monitoring of hyperglycemia in DM also can evaluate the patient compliance. Validation of accuracy and reliability of different glucometers is important to variation in measurements may be attributed to different factors, may be affected by the environment in which glucometers and strips are stored, user dependent factors (operational technique). The aim is to compare capillary blood glucose measures with venous blood glucose by different devices. This prospective randomized study was conducted between January 2014 and May 2014 in Al-Sadder teaching hospital in Basra, Iraq, to compare the results of measurement blood glucose level of two glucose meters (AccuChek® active (Roche Diagnostics, Basel, Switzerland) and Optium Xceed® (MediSense UK, Abingdon, UK) with standard venous glucose measurement using spectrophotometry (hexokinase). One hundred non intensive care unit patients who had been admitted for a variety of medical and surgical problems had been included in the study. All the patients had previously been diagnosed

with diabetes mellitus and under 60 years of age. The results revealed significant differences in glucose levels measured using optimal xeed glucose meter when we compared with Accu check glucose meter and those values measured using standerd venouse glucose mesurment. We conclude that The Accu check glucose meter was more accurate than xeed glucose meter, as compared with ordinary serum glucose measurement by spectrophotometer.