

Chronic Kidney Disease (CKD) is associated with slightly higher frequency prevalence of primary hypothyroidism, but at the same time studies on thyroid hormone status in uremic patients have reported conflicting results. This study was undertaken during the period from February 2014 to January 2015 to quantify thyroid hormones (T3, T4 and TSH), cystatin C, different oxidative stress parameters like serum Ceruloplasmin (CP), Carbonyl, Thiol and total protein (TP) and four trace elements (Molybdenum (Mo), Cadmium (Cd), Manganese (Mn) and Magnesium (Mg)) and explore correlation between these parameters in (75) non-dialyzed CKD patients versus (52) healthy controls. Results indicated that the levels of (T3, T4, CP, TP, thiol, Mo, Cd and Mg) were significantly reduced ($p \leq 0.05$) while the levels of TSH, cystatin C, carbonyl and Mn were significantly increased ($p \leq 0.05$) in the patients group compared to healthy controls. The correlation coefficient (r) test is used to describe the association between these parameters. T3 and T4 were negatively correlated with cystatin C, carbonyl, Mn and Mg, positively correlated with (thiol and protein). T4 was positively correlated with CP while T3 was not correlated with CP. TSH was positively correlated with (CP, carbonyl, thiol, protein), finally, CP was negatively correlated with cystatin C and positively correlated with Mn and Mg.