

# **ABSTRACT**

## **BACKGROUND:**

Chronic kidney disease(CKD) is a general term for heterogeneous disorders affecting kidney structure and function.CKD affects thyroid function in many ways, including low circulating thyroid hormone levels, altered peripheral hormone metabolism, insufficient binding to carrier proteins, reduced tissue thyroid hormone content and altered iodine storage in the thyroid gland.

Patients with CKD have major pro-atherogenic lipid abnormalities leading to increased circulation of atherogenic lipoproteins. There is also growing evidence that abnormalities in lipid metabolism may contribute to renal disease progression.

Early diagnosis of thyroid and lipid disorders by regular screening and treatment of such disorders in CKD patients may be highly beneficial to slow the progression of CKD, in addition to prevention of CVD risk. This study aims at detection of various thyroid and lipid abnormalities in CKD patients.

## **AIMS OF STUDY:**

- To determine Thyroid profile of CKD patients .
- To determine Serum Lipid profile of CKD patients.

## **METHODS:**

A prospective study done in 100 patients for a period of one year from June 2017 to June 2018 in Tirunelveli Medical college &Hospital. I studied the newly diagnosed Chronic Kidney Disease patients and studied their Thyroid and Lipid profile abnormalities.

## **RESULTS:**

In my study population, 100 CKD patients who were on conservative line management were studied. Among them 88% the patients had high TSH values(p value = 0.001),12% had low T3values (p value = 0.001) & 89% had low T4 values(p value = 0.006).

The modification in the serum levels of T3 and T4 in patients with CKD can be considered protective mechanism, favouring conservation of protein.

There is progressive increase in count of patients with a decreasing T3 and T4 and increasing TSH proportional to the severity of renal failure.

There is also increase in incidence of hypothyroidism found in patients with chronic kidney disease.

As the age progresses there is increase in incidence of Low T3 syndrome in patients with CKD.

In patients with low GFR the serum T3,T4 levels was found to be low. This shows a direct linear relationship between GFR and T3,T4 levels.

HDL levels were reduced (p value =0.001) and triglycerides( p value =0.171), total cholesterol( p value =0.001) and TGL levels, LDL(p value = 0.199), VLDL (p value =0.423) were raised in the study group in comparison to the controls.

There is a statistically significant rise in the level of serum triglycerides, Serum LDL, Serum VLDL in CKD grade III,IV,V patients.

There was a negative correlation between serum HDL level and GFR levels( p value=0.199) which was statistically essential & significant.

In all the lipid abnormalities found in CKD were Reduced HDL-C levels in serum along with a significant rise in Serum triglyceride, serum Cholesterol Serum LDL level and Serum VLDL level.

## **CONCLUSION:**

Thyroid dysfunctions and dyslipidemia in CKD may further raise CVD risk leading to high rates of morbidity and mortality. Hence, early diagnosis of Thyroid and lipid disorders in patients with CKD is highly beneficial to slow down the progression of CKD .In addition in also prevents CVD risk.