

A STUDY ON PREVALENCE AND CLINICAL SIGNIFICANCE OF LOW T3 IN NON DIALYSIS CHRONIC KIDNEY DISEASE PATIENTS

ABSTRACT

Background

Chronic kidney disease is one of the most common non-communicable disease with significant mortality and morbidity. Chronic kidney disease leads to permanent loss of nephrons causing disturbance in the normal homeostasis of the body affecting every system of the body. Thyroid function abnormalities in chronic kidney disease are well known but there has been a paucity of studies conducted to establish a physiological link between the two conditions.

Objectives

To study the prevalence of serum low T3 in patients with chronic kidney disease who are not on dialysis. To establish a clinical significance between low T3 and severity of the disease. To study the spectrum of non-thyroid illness in non-dialysis CKD patients.

Methods

In this study, 50 patients of chronic kidney disease who were not on dialysis were randomly selected. After thorough history and detailed examination, blood samples were drawn for renal function tests, serum electrolytes, complete hemogram, routine urine analysis and ultrasonogram of the abdomen. An early morning sample was taken to assess the thyroid function. The correlation between the different thyroid abnormalities and chronic kidney disease were studied.

Results

Alteration of thyroid function is very common in CKD patients. 68% of patients had thyroid abnormalities. Low T3 was widely prevalent among these patients amounting to 58% of the sample. It was also evident that the serum T3 fell more severely with the progress of the disease.

Conclusion

It is very important to screen all CKD patients for thyroid function abnormalities. Low T3 values can be a useful tool to identify the severity of the disease. Lower the value of T3 lower is the eGFR signifying that direct linear relation between eGFR and T3.

Keywords

- Chronic kidney disease
- Low T3
- Thyroid function
- Non-thyroid illness