

단백뇨를 보인 환자에서 혈중 T3 수치가 심혈관계 합병증 및 사망률에 미치는 영향

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Serum T3 Level can be Applied as a Prognostic Factor that Predict Cardiovascular Complication and Mortality in Patients with Proteinuria

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Background : Sick euthyroid syndrome is defined as the reduction of T3 or free T4 without elevation of TSH, it has been reported to be associated with cardiovascular complications. This study was conducted to assess the alteration of thyroid hormones in the patients with proteinuria and to examine the effect of the alteration of thyroid hormones on cardiovascular complications and mortality.

Methods : We retrieved 119 patients with proteinuria higher than 150 mg/day in 24 hr urine test, the results of thyroid hormone function test were examined. It was a retrospective study, and through medical record, the underlying disease, routine lab test, the amount of proteinuria, and level of thyroid hormones, cardiovascular complication, and mortality during follow up period were examined.

Results : The change of thyroid hormones according to the severity of proteinuria, age, and renal function was examined, regardless of proteinuria, with the elevation of the serum T3, it was increased with age ($p=0.006$), and decreased as renal function was deteriorated ($p=0.017$). The predisposing factors on the mortality were age, WBC, Hb, total cholesterol, triglyceride, albumin in 24 hr urine, serum T3, and the incidence of the cardiovascular complications. Multiple regression analysis showed that as serum T3 was decreased ($p=0.033$) and the incidence of cardiovascular complications was increased, the mortality rate became higher ($p=0.039$). In Kaplan–Meier's survival curve, low T3 group was statistically significant lower than normal T3 group ($p=0.000$).

Conclusion : In the patients with proteinuria, the serum T3 concentration was a very important factor for the prediction of the mortality independent of the amount of proteinuria.

Key Words : 단백뇨, 갑상선 호르몬, 사망률
Proteinuria, T3, Mortality