

# Do Children with Steroid Resistant Nephrotic Syndrome Need Arterial Stiffness Assessment?

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## Objectives:

Children with nephrotic syndrome (NS) are assumed to be at increased risk for atherosclerosis and coronary heart diseases (CHD), probably because of NS associated with hyperlipidemia, hypertension and steroid therapy.

This study was aimed at evaluation of the arterial stiffness as a predictor of developing atherosclerosis in children and young adolescents with steroid resistance nephrotic syndrome.

## Methods:

Twenty children were enrolled in this study. They were 11 males and 9 females with a mean of  $10.75 \pm 3.31$  years. They were having proteinuria and depending on steroid therapy. Twenty healthy age and sex matched children served as a control group. All patients and controls were subjected to thorough history taking and clinical examination. All subjects in the study underwent laboratory investigations including urinalysis, 24-hour protein in urine, serum urea and creatinine, triglycerides (TGs), cholesterol, low and high density lipoproteins (LDL and HDL). Renal biopsy was done to diagnose histopathological type of nephrotic syndrome. Doppler study for determination of Ankle Brachial Index (ABI) and carotid duplex.

Graphs and tables

## Results:

The results showed that ankle brachial index was significantly higher in nephrotic patients with steroid resistance than patients with steroid sensitive ( $p < 0.0001$ ). There was a positive correlation between ankle brachial index and dose of steroids and duration of treatment ( $r$ -value 0.63 and 0.61 respectively) ( $P$ -Value 0.003 and 0.005 respectively). The results showed that carotid intimal thickness was significantly higher in nephrotic patients with steroid resistance than patients with steroid sensitive ( $p < 0.001$ ). Carotid intimal thickness was directly correlated to relapse rates and serum LDL and cholesterol ( $p < 0.001$  for each).

## Conclusions:

Ankle brachial index and carotid duplex are simple non-invasive tools to assess arterial stiffness in steroid resistance nephrotic patients.

## References:

Text

