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قسم الأطفال

البحث الخامس

(بحث مشترك منشور مشتق من رسالة علمية)

عنوان البحث :

مقارنة فحص القلب بالموجات الصوتية التقليدية و دوبلر الأنسجة في الأطفال المصابين بالنوع الأولي من متلازمة الكلى النفروزي

Conventional Echocardiography Versus Tissue Doppler in Children with Primary Nephrotic Syndrome

المشاركون في البحث : د. أشرف سيد كامل* - د. سارة إبراهيم ابو النور* - د. محمد عبدالعزيز الجمسي* - د.

مرودة محمد رجائي*

*قسم طب الأطفال جامعة الفيوم ** قسم طب الأطفال جامعة طنطا

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Abstract

Introduction: Cardiac affection in patients with nephrotic syndrome (NS) may be attributable to malnutrition and activated inflammatory state. Myocardial performance index (MPI) is more sensitive than the classic echocardiographic parameters, particularly in showing subclinical myocardial function compromise. **Aim of the study:** To compare the findings of conventional echocardiography and tissue Doppler imaging in children with NS. **Methods:** This study was conducted at the outpatient Nephrology Clinic and the Cardiology Unit of Pediatric Department at Fayoum University Hospital. It included 30 patients with primary nephrotic syndrome (PNS) compared with 30 apparently healthy subjects, age- and gender-matched to the diseased group. Participants were subjected to full history taking, thorough clinical examination, anthropometric measurements, and laboratory studies. Conventional echocardiography and tissue Doppler imaging were used for evaluation of ventricular hemodynamics. **Results:** Conventional echocardiography did not reveal any significant differences between the patients and control subjects. Tissue Doppler imaging showed significant differences in some parameters. The right ventricular (RV) and left ventricular (LV) MPI were high in 30% and 20% of PNS patients, respectively. Both LV and RV dysfunctions were significantly associated with longer duration of disease and treatment as well as higher percentage of relapse, steroid resistance, and intake of immunosuppressives. **Conclusion:** Both LV and RV dysfunctions may occur in children with PNS. Both conditions were significantly associated with disease duration, treatment duration, relapse, steroid resistance, and administration of immunosuppressive drugs. Tissue Doppler echocardiography is recommended for follow-up of NS patients, particularly those with long disease duration and/or prescribed immunosuppressive drugs.

Keywords: child; conventional echocardiography; myocardial performance index; nephrotic syndrome; tissue doppler imaging.

عميد كلية الطب

رئيس قسم الأطفال

أ.د/ حمدي محمد ابراهيم

أ.د/ هدير محمود جمال الدين