كلية الطب – جامعة الفيوم
قسم الأطفال

الملخص الإنجليزي للأبحاث المقدمة من

الدكتور / أشرف سيد كامل عطاالله أستاذ مساعد طب الأطفال كلية الطب جامعة الفيوم الى اللجنه العلمية الدائمة لطب الأطفال للحصول على اللقب العلمى لوظيفة أستاذ

البحث الثانى

(بحث مشترك منشور دولى مشتق من رسالة علمية)

عنوان البحث :

معدل قياس الاوستيوبونتين كعلامة على اعتلال الأوعية الدموية في الأطفال الذين يعانون من داء السكري من النوع الاول : العلاقة ببنية الأوعية الدموية

Osteopontin as a marker of vasculopathy in pediatric patients With type 1 diabetes mellitus: Relation to vascular structure

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مكان نشر البحث:
Pediatric Diabetes. 2018; 19:1107–1115. Impact Factor: 3.13 /Pubmed doi.org/10.1111/pedi.12686 Q1 web of science Volume19, Issue6

ABSTRACT

Background: Type 1 diabetes mellitus (T1DM) is associated with serious micro-vascular and macro-vascular complications. Osteopontin (OPN) has emerged as a strong predictor of incipient diabetic nephropathy and a first-ever cardiovascular event in adults with T1DM. OPN is linked to coronary atherosclerosis in type 2 diabetes. The **aim** of the study was to test the hypothesis that OPN could be a potential marker for micro-vascular complications in children and adolescents with T1DM and we assessed its relation to carotid and aortic intima media thickness (CIMT and AIMT) as non-invasive index for subclinical atherosclerosis.

Methods: Eighty patients with T1DM ≤18 years were divided into 2 groups according to the presence of micro-vascular complications and compared with 40 age- and sex-matched healthy controls. Fasting blood glucose, high sensitivity C-reactive protein (hs-CRP), HbA1c, urinary albumin creatinine ratio (UACR), OPN, CIMT, and AIMT were assessed. **Results:** Both CIMT and AIMT were significantly higher in patients with and without microvascular complications compared with healthy controls ($P < 0.001$). OPN concentrations were significantly elevated in all diabetic patients compared with controls ($P = 0.002$). OPN was also significantly higher in patients with micro-vascular complications than patients without ($P < 0.001$) but levels were comparable among those without complications and controls ($P = 0.322$). Receiver operating characteristic curve analysis revealed that OPN cut-off value 90 ng/mL could differentiate patients with and without micro-vascular complications with 81.7% sensitivity and 95.8% specificity. Significant positive correlations were found between OPN and HbA1c, UACR, CIMT, and AIMT. **Conclusions**: OPN could be considered a marker of vasculopathy and subclinical atherosclerosis in pediatric T1DM.

KEYWORDS aortic/carotid intima media thickness, atherosclerosis, microvascular complications,osteopontin, type 1 diabetes

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