Insulin-like growth factor-1 and insulin-like growth binding protein-3 in children with congenital heart diseases

Ashraf Abd El Salam Saleh

The etiology of growth failure in children with CHD appears to be multifactorial and not entirely accounted for by haemodynamic disturbances or nutrition alone.The aim of the present study was to evaluate the role of IGF-1 and IGFBP3 in congenital heart diseases.This study was conducted on 30 children diagnosed as congenital heart disease, attending cardiology department clinic in Abo El-Rish Hospitals.The study were divided into 3 groups:Group I : Control group: 15 patients with an age (3.1 1.9 years), 7 males and 8 females.Group II : Acyanotic group : 15 patients with an age (2.16 1.1 years), 9 males and 6 females.Group III : Cyanotic group : 15 patients with an age (2.87 1.7 years), 10 males and 5 females.The patients were compared to a control group which included 15 well nourished apparently healthy children.All the studied groups were subjected to :• Full history taking with special emphasis on the presence or absence of cyanosis, feeding habits, caloric intake and presence or absence of complications.• Thorough physical examination with special emphasis on physical appearance and complete cardiac examination including inspection, palpation, pericardial percussion and auscultation.• Anthropometric measures (weight, height, BMI).Serum IGF-1 and IGFBP3 were assessed in all patients and controls.In the present work, both cyanotic and acyanotic groups were stunted and underweight, with more severe affection of cyanotic patients compared to acyanotic patients and the controls.The results of this study revealed that serum IGF-1 level was unrelated to age or sex in the cyanotic group as well as the control group.There was non significant correlation between serum IGF-1 level and age in acyanotic children.The present work showed that serum level of IGF-1 was statistically significantly lower in the cyanotic and acyanotic groups than serum IGF-1 level of the controls (P