

POSTER PRESENTATION

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Plasma cholinesterase activity in children with infective endocarditis

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Background

Although pre-existing heart disease in children is the most frequent predisposing factor for infective endocarditis (IE), we reported 6 children of IE with no apparent pre-existing cardiac disease.

Methods

Our study included six patients with acquired infection from central catheter; the microbial pathogens were *Streptococcus viridans* (n = 3) and *Staphylococcus aureus* (n = 3). The diagnosis of IE was based on positive blood culture (2 positive cultures of blood samples drawn > 12 hours), evidence of endocardial involvement (positive ECHO), measuring raised erythrocyte sedimentation rate and plasma cholinesterase (PChE) activity. We measured PChE activity ($\mu\text{mol min}^{-1}\text{ml}^{-1}$) in children with IE (group A, n = 6) and in IE-free children (group B, n = 10). For determination of PChE activity vein blood samples were collected and stored at -20°C until analyzed. PChE activity was determined by the spectrophotometric method of Ellman using butyrylthiocholine as the substrate (Sigma Chemical Co., St. Louis, Mo, USA). Statistical analysis was made by Student's t-test.

Results

In group A of examined children with IE we measured decreased PChE activity (1.89 ± 0.24) relation to patients of control group B (3.97 ± 0.20).

Conclusion

Our study indicates that PChE activity can be also an important parameter for the diagnosis of IE.

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