



## PROCALCITONIN IS A MARKER OF INFECTION AFTER SURGERY FOR VALVULAR HEART DISEASE IN A PREDOMINANTLY RHEUMATIC POPULATION

ACC Poster Contributions

Georgia World Congress Center, Hall B5

Sunday, March 14, 2010, 3:30 p.m.-4:30 p.m.

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Session Title: Surgical Outcomes in Valvular Disease

Abstract Category: Valvular Disease

Presentation Number: 1115-379

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**Background:** The systemic inflammatory response (SIRS) that ensues after cardiac surgery (CS) makes the diagnosis of post-operative infections difficult, specially in patients with inflammatory conditions such as rheumatic fever. In valvular heart disease (VHD) patients this diagnosis is even more critical because of the possibility of early endocarditis. We studied procalcitonin (PCT), a marker that is elevated in bacterial infections but not in SIRS in a population of VHD patients of predominant rheumatic etiology

**Methods:** We followed prospectively 178 consecutive patients submitted to CS due to VHD between 12/2004 and 06/2006. Mean age  $47 \pm 21.6$  years, 73% female, 72% of rheumatic etiology, 100% with heart failure functional class III/IV. PCT dosages were made at the pre-operative period, 2nd post-operative day (2ndPO), 4th PO day and 7th PO day. C-reactive protein, alpha-1 glycoprotein and erythrocyte sedimentation rate were also measured in all patients, before and after surgery. The study end-point was the clinical and laboratorial diagnosis of post-operative infection until the 30th PO day

**Results:** Rheumatic patients did not had higher procalcitonin or inflammatory markers levels than non-rheumatic patients at baseline. 34% percent of the patients had a infectious diagnosis until the 30th post-operative day. Most common infections were of the respiratory tract (38%) and surgical wound (17%). Procalcitonin levels were significantly higher in all post-operative days in those patients with a diagnosis of infection until the 30th PO day. Multivariate analysis identified the level of procalcitonin in the 2ndPO ( $p=0.006$ ) and cardiopulmonary bypass time ( $p=0.01$ ) as independent predictors of infection. The other inflammatory markers had similar levels in both groups.

**Conclusions:** Procalcitonin levels in the 2ndPO and cardiopulmonary bypass time are independent predictors of infection in VHD patients of predominant rheumatic etiology.