

Aortic Regurgitation Developed in the Patients of Behcet's Disease

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Background : Behcet's disease (BD) is systemic vasculitis, and a rare but significant cause of aortic regurgitation (AR). Serious postoperative complications such as valve detachment leading to poor prognosis are common. However, clinical features of this disease have not been fully characterized. **Methods :** Between 1990 to 2007, 13 patients with AR due to BD underwent open-heart surgery in SNUH. Their clinical records were retrospectively analyzed. **Results :** All patients were men, and their ages at 1st surgery were 38 ± 7 yrs. Mean follow-up (FU) duration was 59.3 ± 48.7 mo. Only 2 patients were preoperatively diagnosed as BD. Most patients underwent repeated surgeries (mean 2.3 ± 1.2), and 5 patients died. Among 4 patients whose preoperative echocardiography could be reviewed, 2 cases showed characteristic aneurysmal change and prolapse of noncoronary cusp. One of them was accompanied by echo-free space around aortic root. Other 2 cases showed valvular thickening and root dilatation, respectively. The clinical outcomes were strongly correlated with therapeutic modality. 11 patients finally underwent aortic root replacement (ARR) after repeated AVRs. Only 3 of them died. However, all 2 patients who had only AVRs died. 3 of 10 patients who took immunosuppressive therapy (IST) died. 2 patients who didn't take IST all died. ARR and IST significantly associated with longer event (composite of redo-surgery and death) free period (for ARR or AVR, 51.7 ± 47.3 vs 11.8 ± 19.4 mo., $p=0.02$; for IST or not, 50.5 ± 50.5 vs 12.6 ± 15.9 mo., $p=0.03$). CRP ($p=0.04$) and ESR ($p=0.07$) during FU tended to be negatively correlated with event free period. **Conclusions :** These results demonstrate that therapeutic modality (ARR&IST) have a significant impact on clinical outcomes of AR due to BD. The poor prognosis of this disease entity could be overcome through the early diagnosis using characteristic echocardiographic findings and physical examination and the selection of appropriate therapy.

Plasma B-type Natriuretic peptide level in Patients with Chronic Severe Mitral Regurgitation before and after Mitral Valve Surgery

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Background : In patients with mitral regurgitation, plasma BNP level was reported to correlate with symptom and severity of MR and outcome. However, the determinants of BNP levels and the effects of mitral valve surgery on BNP levels are not clearly elucidated. **Method :** 38 patients with chronic severe MR undergoing mitral surgery were prospectively enrolled. Patients who had significant renal, pulmonary, coronary or other valvular diseases were excluded. BNP level assay and echocardiographic studies were done before and 6 months after surgery. **Results :** At baseline, mean end-diastolic (EDVI) and end-systolic left ventricular (LV) volume indexes (ESVI) were 118.6 ± 25.9 , 44.0 ± 21.3 ml/m², respectively. LV EF was $62.0 \pm 6.0\%$, and regurgitant fraction (RF) $70.0 \pm 10.2\%$. Mean preoperative BNP level was 105 ± 128 pg/mL. In multivariate analysis, preoperative BNP level was independently related with the presence of AF, left atrial volume index and systolic PAP. However, LVEF, EDVI, ESVI, and RF were not related. In all, plasma BNP did not decrease after surgery (105 ± 128 vs. 81 ± 82 pg/mL, $p=0.26$). In contrast, patients who had concomitant MAZE operation for AF (N=14) showed a significant reduction in BNP level from 133 ± 84 to 67 ± 47 pg/mL ($p=0.02$). **Conclusion :** In patients with chronic severe MR, plasma BNP level was independently related with the presence of AF, LA size and pulmonary hypertension, but not with LV volume and MR severity. BNP level decreased after successful surgery only in patients who had concomitant MAZE operation for AF.

