

## TECHNIQUE OF VEIN PATCH ANGIOPLASTY IN LIEU OF ENDARTERECTOMY IN DIFFUSE CORONARY ARTERY DISEASE

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When coronary arteries contain diffuse calcific atherosclerosis, or are affected by multiple areas of stenoses, an area ideal for distal anastomosis for a graft may not be found. In an effort to achieve complete myocardial revascularization of left anterior descending artery (LAD) territory in such a setting, a technique of saphenous vein patch angioplasty (VPA), once the LAD is splayed open over the length of the disease, followed by end-to-side anastomosis with left Internal Mammary Artery (LIMA) to the patch is performed. Effort is made to avoid endarterectomy whenever possible.

Between Aug./92 and Jan./96, 22 (18 ♂, 4 ♀) out of 638 patients undergoing coronary artery revascularization underwent VPA procedures to LAD with subsequent LIMA anastomosis. Mean age of the patients was 63.0 years (range : 46~75 years), compared to a total population mean age of 62.8 years. The mean number of bypass grafts was 3.1, compared to a total population mean of 3.5 grafts. Six patients had complete proximal LAD occlusion pre-operatively, and 1 patient underwent previous PTA of LAD. Four patients were classified as having unstable angina pre-operatively and 12 patients had myocardial infarctions pre-operatively. Mean length of angioplasty was 4.1 cm (range : 2.5~7.0 cm) and partial/minimal endarterectomy was required in 6 patients.

There were no operative deaths. Mean length of post-operative ICU and hospital stays was 1.7 and 8.4 days, compared to a total population mean of 2.2 and 8.9 days respectively. All 22 patients (100%) have been followed up with a mean duration of 21.7 months (range : 8~35 months). NYHA functional Class has improved from a pre-op. mean of 3.3 to a post-op. mean of 1.2. Two patients had recurrence of angina pectoris since initial surgery. One of the 2 patients subsequently underwent PTCA of the right coronary artery, which was disease-free during the initial surgery 18 months prior, and remains at NYHA Class 2 at present follow-up. Angiographic assessment of VPA of LAD at that time showed this area of the vessel to remain widely patent with no evidence of stenosis or aneurysmal changes. The second patient had recurrence of angina at 15 months post-operatively, and subsequent angiogram showed complete occlusion of native LAD and remains at NYHA Class 4. Overall, 20 patients (91%) remain symptom-free.

The technique of vein patch angioplasty of diffusely diseased LAD with subsequent LIMA anastomosis is an innovative and effective form of surgical procedure with a good early clinical outcome.