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EVALUATION OF DIRECT SURGICAL TECHNIQUES FOR ISCHEMIC VENTRICULAR TACHYARRHYTHMIAS

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Various direct surgical techniques has employed the patients with ischemic ventricular tachyarrhythmias, while the unsatisfactory results attained by indirect surgical techniques during past years. The clinical results of endocardial resection procedure (ERP) and the effect of experimental chemical ablation were evaluated in this study.

After left atriotomy under cardiopulmonary bypass, the left ventricular endocardium was painted with Lugol's solution (5% I₂, 10% KI) in 10 dogs. Postoperative mean QRS duration was significantly prolonged for control. Postoperative ventricular fibrillation threshold rose for control significantly. Light microscopy of the ventricular endocardium with Lugol's solution revealed non-specific inflammation and histological injury localized to the subendocardial Purkinje network.

ERP only or ERP in additional ablation technique were employed in 10 patients (4 on acute state and 6 on chronic state) under intraoperative electrophysiological study. The operative results were obtained with operative mortality rate of 17%, VT recurrent rate of 0% and overall success rate of 83%.

This clinical results suggest that this direct surgical technique can be applied safely and effectively in all patient without acute patients in whom chemical ablation might be available widely.

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COMBINED VALVULAR AND CORONARY ARTERY SURGERY

-AN EXPERIENCE OF 4 CASES-

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From 1983 to 1985, combined valve replacement and aorto-coronary bypass were successfully performed in 4 patients with valvular and ischemic heart disease. The age was ranged from 26 to 62 years (average 52 years). All patients had severe anginal attack and were in grade III or IV of NYHA classification. Mitral regurgitation due to papillary muscle dysfunction in one case and aortic regurgitation in 3 cases were repaired by valve replacement, and 6 grafts were simultaneously placed in all. In one case, operative trans-luminal coronary angioplasty was made for 90% stenosis of LMT in addition to saphenous vein grafts to LAD and Cx. Although the time of cardiopulmonary bypass (CPB) and aortic cross clamp was prolonged in comparison with single cardiac procedure, all the patients could be weaned from CPB without intra-aortic balloon pumping and postoperative courses were uneventful. Severe anginal attack disappeared in all patients postoperatively and 5 of 6 grafts were angiographically patent. In conclusion, it was considered that the most important factor to perform combined operations for valvular and ischemic

heart disease safely was to make the effective myocardial protection.

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GRAFT PERFORMANCE DURING EXERCISE IN INTERNAL MAMMARY ARTERY (IMA) AND SAPHENOUS VEIN (SV) AORTOCORONARY BYPASS GRAFTS

-EVALUATED BY RADIONUCLIDE METHODS-

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The long-term patency of IMA graft is consistently reported to be superior to SVG. However, graft flow capacity during exercise in the IMA has been discussed.

By radionuclide methods, we examined cardiac performance during exercise, of 17 patients (G-1) who had patent IMA bypass graft to LAD and of 12 patients (G-2) who had patent SVG to LAD, without previous myocardial infarction of anterior wall. Two groups had no statistically significant differences in age, number of grafts, total graft patency rate, preoperative cardiac function and time of pre- and post-operative study, except for LAD graft flow measured during operation. Both groups showed significant improvements up to normal range in initial 201 Tl uptake ratio score, in regional washout rate of LAD region and there were no statistical differences in improvements between G-1 and G-2. Exercise global LVEF and regional LVEF of LAD region (RI angiography) exhibited a similar increase in both groups.

In conclusion, IMAG showed a similar graft performance on cardiac function during exercise evaluated by radionuclide methods in comparison with SVG.

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CORONARY ENDARTERECTOMY IN 27 PATIENTS

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In an attempt to extend the indications for CABG in patients with diffuse disease or poor runoff on whom conventional CABG is anticipated to occlude, coronary endarterectomy (CE) combined with vein bypass grafting was placed in 27 patients (male 20, female 7, mean age 55.6 yrs; Jan 1984 to Dec 1985). Coronary lesions included: LMTD in 4 pts, 3VD in 16 pts and 2VD in 7 pts. The CE was performed manually, not using CO₂ gas. Thirty one CE, 19 on the RCA and 12 on the left coronary artery system were performed. Recent cases received low molecular weight dextran, aspirin, dipyridamole and warfarin as soon as the postoperative bleeding ceased. There were no operative deaths within one week after surgery, however there were 3 hospital deaths