LETTERS TO THE EDITOR

Clinical outcome in patients undergoing coronary artery bypass grafting using radial artery

Use of radial artery as a graft for coronary artery revascularization was first proposed by Carpentier and associates in 1973 but soon abandoned because of its tendency to spasm[1]. The clinical application of the radial artery was not established until 1992, when Acar and colleagues reported a series of 104 patients who underwent radial artery grafting with an angiographic early radial graft patency rate of 93.5%[2]. These improved results were attributed to the appropriate use of pharmacological antispasm agent such as calcium channel blocker. An arterial graft more closely approximates the diameter of the coronary artery; for an equivalent flow volume, blood velocity is greater than for vein grafts, which may reduce stasis. The elastic and collagen support of the arterial wall is suited to arterial pressures that may be injurious to vein graft structure[3]. The radial artery is readily available and can be removed safely. The size is ideal for a coronary artery reconstruction. Radial arteries can be combined with IMAs to produce a complete arterial reconstruction in most patients[4].

The number of coronary artery bypass graft surgery done at the Department of Cardiac Surgery, National Institute of Cardiovascular disease in 2003 was 170. Among them we included 60 cases who needed coronary artery bypass graft surgery with ejection fraction by echocardiography >35%, and Modified Allen's test negative. The patients were divided into two groups, 30 patients in each group. Patients in Group I received left internal mammary artery with radial artery whereas in Group II received left internal mammary artery with saphenous vein.

The age ranged from 28 to 72 years with mean 46.50 $\pm$ 7.80 years. There were 56 male and 4 female. All patients had chest pain and exertional dyspnoea.

Myocardial infarction was assessed by estimating serum aspertate aminotransferase levels, CKMB levels and electrocardiographic changes in peri-operative period, in ICU "O", first and third post-operative days. Both serum aspertate aminotransferase and CKMB levels were comparatively higher in Group II than in Group I (Table I).

Table I: Serum aspertate aminotransferase and CKMB levels in patients with coronary artery bypass grafting

	Pre-operative	First post-operative day	Third post-operative day
Serum aspertate aminotransferase			
Group I	21.34 $\pm$ 1.95	38.21 $\pm$ 1.82	35.08 $\pm$ 2.46
Group II	22.41 $\pm$ 1.66	71.26 $\pm$ 7.89	54.73 $\pm$ 7.68
CKMB level			
Group I	22.02$\pm$ 1.36	50.35 $\pm$ 4.51	40.77 $\pm$ 2.51
Group II	21.91 $\pm$ 1.27	63.40 $\pm$ 5.72	53.78 $\pm$ 3.89

New Q wave and ST-T abnormality were found in 5 (17%) cases in Group II and only ST-T abnormality in 1 (3%) patient in Group I (Table II).

Table II: Electrocardiographic abnormalities found in patients with coronary artery bypass grafting

ECG Finding	Number of patients	
	Group I (n=30)	Group II (n=30)
MI (Q)	0	5
ST-T abnormality	1	5

In total 4 patients (1 from Group I and 3 from Group II) died. The patient from Group I died from respiratory failure on 40th post-operative day. From Group II, two died from myocardial infarction on the first post-operative day and the other patient died from low out-put syndrome on third post-operative day.

There were significant difference of over all post-operative parameter of survive patients of Group I and Group II. Pre-operative parameters were insignificant. The Group II patients suffered from more complications like myocardial infarction and mortality in the early post-operative period.

Saphenous vein grafting although most commonly employed since 1984. Previous long-term studies had shown unsatisfactory patency of saphenous vein grafts used for myocardial revascularization when compared with internal thoracic artery grafts. Thus, the use of arterial conduits has expanded beyond the internal thoracic arteries to include the right gastroepiploic artery, the inferior epigastric artery, and the radial artery[5].

The long-term patency of vein grafts in the coronary circulation has been poor. Like others, it has been observed a vein graft patency rate of less than 50% at 10 year, and those grafts that were

patent often had intraluminal abnormalities that progressed. By contrast, the left internal thoracic artery graft to the left anterior descending coronary artery has been associated with excellent patency and good clinical results[6]. In addition, clinical results and patency associated with use of the right internal thoracic artery as part of a bilateral right internal thoracic artery procedure have been encouraging. The revival of use of the radial artery as a graft has offered another easily accessible source of arterial conduits. Because of these considerations and in an effort to provide a patency rate of better than 50% at 10 years, the majority of grafts were used[7].

In group comparison it revealed that there was significant difference both in electrocardiography and enzyme studies between Group I vs Group II which is similar to the findings of Cohen et al[8].

The changes of CKMB and SGOT were associated with the changes on electrocardiography which is similar to the findings of Fennel et al[9].

There were no significant ECG changes at discharge and follow-up for 12 weeks after surgery.

In conclusion, our study suggests that the routine use of radial artery is not associated with peri-operative myocardial infarction in comparison to saphenous vein graft and does not make the CABG more complex.

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Clinical features and cytogenetic pattern of Down syndrome

Chromosome disorders form a major category of genetic diseases. The most common autosomal disorder is trisomy 21, also known as Down syndrome, which is compatible with survival[1]. Down syndrome is associated with a characteristic set of facial and physical features. It occurs in all ethnic groups and geographical regions[2]. In Bangladesh, no general or regional data are available for Down syndrome. We conducted a study to see the distribution of cytogenetic pattern of Down syndrome by chromosomal analysis from peripheral blood and also to observe the clinical features.

Clinically and cytogenetically diagnosed 43 patients of Down syndrome were included during the period of October 2003 to June 2005. A complete clinical assessment and information pertaining to age, sex, birth order, maternal age at birth, parity and consanguinity were recorded. The patients were examined to detect the characteristic clinical features of Down syndrome. Then karyotyping with standard G-banding technique