SPECIAL INTEREST

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PREDICTORS OF MAJOR IN-HOSPITAL COMPLICATIONS FOLLOWING PERCUTANEOUS TRANSLUMINAL CORONARY ANGIOPLASTY Jolly Bose, WH Chen, C Woo, E Tam, David SW Ho Department of Medicine, The University of Hong Kong, Queen Mary Hospital, Hong Kong.

With increasing affluence and changing life style, coronary heart disease has become one of the leading cause of death in Hong Kong. Percutaneous Transluminal Coronary Angioplasty (PTCA) is a standard therapy for patients with coronary heart disease. This study evaluates the association between patient demographics and major in-hospital complications (defined as death or urgent open heart surgery) following PTCA. A total of 1,150 PTCA procedures were performed in Queen Mary Hospital between September 92 and August 96. Mean age was 62.0 ± 9.5 (73% male). Female patients were significantly older (mean age 64.8 ± 7.9 vs 60.6 ± 9.9, $p<0.0001$). There were 17 in-hospital deaths (1.5%) and 10 urgent open heart surgeries (0.9%). Female patients were more prone to major complications (4.1% vs 1.4%) compared to male (death 2.9% vs 0.9%, $p<0.02$; urgent surgery 1.9% vs 0.5%, $p<0.03$). There was an association between age and major in-hospital complications (4.3% vs 1.8%; age >70 yrs vs ≤70 yrs, $p<0.03$). Patients with renal impairment (defined as a creatinine level of >130 μmol/l) were more susceptible to major complications (7.4% vs 1.8%, $p<0.02$) compared to those without renal impairment. Those with triple vessel disease were more susceptible to major complications compared to those with single vessel disease (4.9% vs 1.6%, $p<0.01$) and double vessel disease (4.9% vs 1.8%; $p<0.04$). Major complications were also significantly dependent on PTCA operators ($p<0.04$). Although there was a tendency towards more major complications in those with diabetes and in those with hypertension, this did not reach statistical significance. In conclusion, female gender, age >70 yrs, chronic renal impairment, triple vessel disease and PTCA operators were associated with major in-hospital complications following PTCA.

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INITIAL EXPERIENCE WITH THE NEW MULTILINK CORONARY STENT. L CHOW*, D Y HU, S Q JIA, T C LI, S C YANG. *Division of Cardiology, Grantham Hospital, Hong Kong. Heart Center, Beijing Red Cross Chao Yang Hospital, Capital University of Medical Sciences, P R China.

The new ACS Multilink coronary stent is cut from a single stainless steel cylinder. Its distinctive, intricate structure is composed of multiple rings connected to multiple links and offers a combination of strong radial strength, flexibility and conformability. The protective sheath of the OTW system improves the safety margin for stent deployment for at least moderately high grade lesions and distal lesions. From March to September 1996, 38 multilink stents were deployed in 35 patients (28 males, 7 females, mean age 58.4 ±10.5 years). 20 patients had refractory angina, 3 had unstable angina and 12 had recent infarction. Stents were implanted electively in 30 and ad-hoc in 5. Risk factors included hypertension (37%), diabetes (22%), smoking (74%) and hypercholesterolaemia (70%). There were 15 one-vessel (43%), 12 two-vessel (34%) and 8 three-vessel cases (23%). The mean LVEF was 58 ± 12%. The aspirin /ticlopidine regime was employed. Indications for stenting were de-novo in 12 (34%), restenosis 2 (6 %), suboptimal 9 (26%), non-occlusive dissection 9 (26%) and threatened closure 3 (8%). Location of lesions were 50% LAD, 21% LCX, 29% RCA. Lesions were moderately complex according AHA/ACC guidelines : Type A 3 (9%), B1 9 (26%), B2 10 (28%), type C 13 (37%). The mean reference diameter was 3.06 ± 0.26 mm and the lesion diameter stenosis was 88 ± 9% and final post-stenting residual stenosis of 0 ± 4%. High pressure inflation was employed in all patients except one (mean 11.2 ± 1.7 atm). Adjunctive balloon angioplasty was performed in 9 patients for lesions other than the non-stented segments. Procedural success was 97%. There was no major adverse cardiovascular event and no subacute stent thrombosis. There was one major gastrointestinal bleeding and one case of neutropenia reversible with ticlopidine withdrawal. Clinical follow up from 3 weeks to 6 months (mean 2.7 ± 1.6 months), 33 patients remained free of angina and 12 had negative ETT. One patient had positive ETT and had in-stent restenosis and received repeat angioplasty, another one developed angina at six month had stent occlusion and was treated medically. Coronary stenting using Multilink is immediately safe with high procedural success and is effective in the treatment of at least moderately complex lesions and the strong radial force would predict a low restenosis rate. The long term result of this new stent needs to be evaluated further and current datas appear promising.