SUMMARY

Angiographic finding after PCI in patients complaining of chest pain within one month after successful PCI were studied. Two recent randomized studies have shown that C S is associated with a significant reduction in restenosis when compared with PTCA *(Van der Wierken ,1999)*

Subsequent insight from intracoronary ultrasound studies in humans have demonestrated that neointimal thickening is the major mechanism of restenosis after CS, as the stent prevent the remodeling process *(Hoffman et al , 1996).*

Knowledge of risk factors for restenosis after coronary stent placement may help to optimize indications and stent depolyment technique and to guide strategies against this problem.

The objective of this study was to identify clinical, lesional and procedural factors able to predict early restonsis after PCI, and to compare the advantages of stenting over balloon PTCA only. This study was done from January 2002 to January 2003. Patients with abrupt vessel closure immediately after PCI, subacute stent thrombosis and chest pain before hospital discharge, were excluded from the study.

The number of patients of the sudy were 30 patients with successful PCI, either stenting or after balloon PTCA. These

patients had 50 lesions (14 patients have single lesion, 12 patients have 2 lesions, and 4 patients have 3 lesions).

Biplane angiography was performed at the start of the procedure to display the most sever aspect of the lesion intravenously. CS was performed under complete standardized conditions. Ticlopidine (500 mg/day) was started 4 days before the procedure, and continoued for 4 week their after. Heparin infusion for 12 hours after the procedure was used in a minority of cases. The patient who were complaining of chest pain and admitted to (CCU) within one month ofter successful PCI were studied for detection of restenosis. Patients were classified into restenosis group and no restenosis group, where patients with lesions > 50 % stenosis were classified as restenosis group, where patients with lesions<50% stenosis or new lesions were classified as no restenosis group.

Lesions were classified according to the AHA/ACC classification. Type A were categorized as simple, while type B&C were categorized as complex. Quantitative coronary angiography analysis was performed to these patients and studied.

Risk factors, clinical presentation, lesional variables and their correlation with restenosis

The risk factors and clinical presentations were not predictors of restenosis except for diabetes mellitus which is a major contributing factor for restenosis.

Regarding lesion variables, lesion type and lesion type and lesion length were the only predictors of restenosis. Type A lesions were 12 lesions all of them in norestenosis group. Type B lesion were 28 lesion. 7 lesions (25 %) were in restenosis group and 21 (75 %) were in no restenosis group. Type C were 10 all of them were in restenosis group.

Procedural variables , and their correlation with restenosis:

The total number of stents was 31. 8 stents (26%) were in restenosis group and 23 stents (73%) were in no restenosis group . the balloon PTCA were 9 lesions all of them were in restenosis group which indicate that C S is much more superior than PTCA alone .

Other procedural factors as stent type , stent length , number of stents at the lesion , and the inflation pressure were not predictor of restenosis .

Angiographic Variables and their correlation with restenosis :

The angiographic predictors of restenosis were the reference diamter (3.16 ± 0.4 mm in restenosis group VS 3 ± 0.35 mm in norestenosis group).

Restenosis in patients with reference diamter ≤ 3 mm (60 %) while restenosis in patients with reference diameter >3 mm (40%) . which means that restenosis increase when reference diameter decrease . MLD post PCI also an important predictor of restenosis (2.7 mm in restenosis group and 3.1 mm in no restenosis . $P < 0.005$).