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Abstract

The choice of CABG versus PCI for multi vessel disease is a complicated decision. Within the past decade, several randomized controlled trials have been published comparing percutaneous coronary intervention (PCI) to coronary artery bypass graft surgery (CABG). This study was conducted on fifty diabetic patients with ischemic heart disease who showed multivessel lesions with good distal run off that could be treated either by PCI or CABG at the period from December 2000 to August 2007.

The patients were divided into two groups:

Group (A) included twenty five patients who underwent PCI to accessible lesions.

Group (B) included twenty five patients who underwent CABG for diseased vessels.

Follow up for one year for all the patients showed that MACE positive patients in group (A) were 36% versus 24% in group (B). The difference between the two groups was statistically insignificant.

Our study showed also that long duration of DM and use of insulin therapy are highly significant predictors of ISR in diabetics.

Key words: multivessel coronary artery disease, diabetes mellitus, percutaneous coronary intervention, coronary artery by pass grafting.

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List of Abbreviations

ABCD	Appropriate Blood Pressure Control in Diabetics.
ACEI	Angiotensin converting enzyme inhibitors.
ACC	American College of Cardiology.
ACS	Acute coronary syndrome.
ADA	American Diabetes Association.
AF	Atrial fibrillation.
AGES	Advanced Glycation End Products.
AHA	American Heart Association.
ALT	Alanine transferase enzyme.
ARBs	Angiotensin receptor blockers.
ARIC	The Atherosclerosis Risk In Communities.
ARTS	Arterial Revascularization Therapy Study.
ASPECT	The Asia Paclitaxel Eluting Stent Clinical Trial.
AST	Aspartate transferase enzyme.
ATPIII	Adult Treatment Panel III.
AWESOME	The Angina With Extremely Serious Operative Mortality Evaluation study.
BARI	Bypass Angioplasty Revascularization Investigation.
BB	Beta blockers.
BENESTENT	A comparison of balloon expandable stent implantation with PTCA.
BIPS	Bezafibrate Infarction Prevention Study.
CABG	Coronary arteries bypass grafting.
CABRI	Coronary Angioplasty versus Bypass Revascularization Investigation.

List of Abbreviations

CAD	Coronary artery disease.
CAN	Cardiac autonomic neuropathy.
CAPP	Captopril Prevention Project.
CARDS	Collaborative Atorvastatin Diabetes Study.
CARE	The Cholesterol and Recurrent Events.
CASS	Coronary Artery Surgery Study.
CAVEAT-1	Coronary Angioplasty Versus Excisional Atherectomy Trial-1.
CCB	Ca channel blockers.
CETP	Cholesterol ester transfer protein inhibitors.
CHARISMA	Clopidogrel for high Atherothrombotic Risk and Ischemic Stabilization, Management and Avoidance trial.
CHD	Coronary Heart Disease.
CHF	Congestive heart failure.
CLASSICS	Clopidogrel Aspirin Stent Intervention Cooperative Study.
Cr.	Serum Creatinine.
CREDO	Clopidogrel for Reduction of Events During Observation study.
CURE	Clopidogrel in Unstable angina to prevent Recurrent Events.
CVD	Cardiovascular disease.
D	Diagonal artery.
DAIS	The Diabetes Atherosclerosis Intervention Study.
DBP	Diastolic blood pressure.
DCCT	The Diabetes Control and Complication Trial.
DECODE	The Diabetes Epidemiology Collaborative analysis Of Diagnostic criteria in Europe.
DES	Drug eluting stents.

List of Abbreviations

DIGAMI	The Diabetes and Insulin-Glucose infusion in Acute Myocardial Infarction.
DM	Diabetes Mellitus.
DS	Diameter stenosis.
EAST	Emory Angioplasty Versus Surgery Trial.
ECG	Electrocardiogram.
EDD	End diastolic diameter.
EF	Ejection fraction.
ELCA	Excimer laser coronary angioplasty.
ELUTES	The Evaluation of paclitaxel Eluting Stent.
EPISTENT	Evaluation of Platelet IIb/IIIa Inhibitor for Stenting.
ERACI	Argentine Randomized Study of Coronary Angioplasty.
ERASER	Evaluation of Reopro and Stenting to Eliminate Restenosis.
ESC	European Society of Cardiology.
ESD	End systolic diameter.
FACET	Fosinopril versus Amlodipine Cardiovascular Events Randomized Trial.
FBS	Fasting blood sugar.
FDA	The United States Food and Drug Administration.
FFAs	Free fatty acids.
FFR	Fractional flow reserve.
FIM	First In Man.
FLARE	Fluvastatin Angiographic Restenosis Trial.
FS	Fraction shortening.
GP	Glycoprotein.
HB	Hemoglobin.
HbA ^{1c}	Glycosylated hemoglobin A ^{1c} .

List of Abbreviations

HDL-C	High density-lipoprotein cholesterol.
HOMA	Homeostasis assessment model.
HOPE	Heart Outcomes Prevention Evaluation Study.
HOT	Hypertension Optimal Treatment.
HPS	Heart Protection Study.
HTN	Hypertension.
ICAM-1	Intercellular adhesion molecule-1.
IHD	Ischemic heart disease.
IMPACT-II	Intergrilin to Minimize Platelet Aggregation and Coronary Thrombosis Trial.
IRAS	The Insulin Resistance Atherosclerosis Study.
IRDM	Insulin requiring diabetes mellitus.
IRS	Insulin resistance syndrome.
ISAR	Intracoronary stenting and Antithrombotic regimen.
ISR	Instent restenosis.
IVS	Interventricular septum.
IVUS	Intravascular ultrasound.
JNC VII	The seventh reports of Joint National Committee of Hypertension.
LAD	Left anterior descending coronary artery.
LCX	Left circumflex artery.
LDL-C	Low density-lipoprotein cholesterol.
LF RADIAL	Left radial artery.
LIFE	Losartan Intervention For End point reduction in hypertension.
LIMA	Left internal mammary artery.
LIPID	Long Term Intervention with Pravastatin in Ischemic Disease.
LIPS	Lescol Intervention Prevention Study.
LMCA	Left main coronary artery.

List of Abbreviations

LVEDD	Left ventricular end diastolic diameter.
LVESD	Left ventricular end systolic diameter.
LVH	Left ventricular hypertrophy.
LVPW	Left ventricular posterior wall.
MACCEs	Major adverse cardiac and cerebrovascular events.
MACE	Major adverse cardiac events.
MAP-K	Mitogen activated protein-kinase.
MARCATOR	Multicenter American Research trial with cilazapril after Angioplasty to prevent Transluminal Coronary Obstruction and Restenosis.
MERCAOR	Multicenter European Research trial with cilazapril after Angioplasty to prevent Transluminal Coronary Obstruction and Restenosis.
MI	Myocardial infarction.
MRFIT	Multiple Risk Factor Intervention Trial.
N	Normal value.
NCEP	National Cholesterol Education Program.
NIDDM	Non insulin dependant diabetes mellitus.
NIRDM	Non-insulin requiring diabetes mellitus.
ISAR	Intracoronary Stenting and Antithrombotic regimen.
OD	Optical density.
OM	Obtuse marginal artery.
OPCAB	Off-pump coronary artery bypass.
PAD	Peripheral arterial disease.
PAI-1	Plasminogen activator inhibitor-1.
PCI	Percutaneous coronary intervention.
PCR	Percutaneous coronary revascularization.
PDA	Posterior descending artery.

List of Abbreviations

PDAY	Pathobiological Determinants of Atherosclerosis in Youth.
PDR	Proliferative diabetic retinopathy.
PL	Postro-lateral artery.
PN	Peripheral neuropathy.
PO	Pulmonary edema.
PPAR- γ	Perioxisomal Proliferation Activating Receptor Gamma.
PPBS	Two hour post prandial blood sugar.
PRESTO	Prevention of REStenosis with Tranilast and its Outcomes Trial.
PT	Prothrombine time.
PTCA	Percutaneous transluminal coronary angioplasty.
PTFE	Polytetrafluoroethylene.
QALYs	Quality-adjusted life-years.
QCA	Quantitative coronary angiography.
RA	Rotational atherectomy.
RAVEL	Randomized double blind study Assessing the sirolimus Eluting BX velocity balloon Expandable stent in de novo native coronary artery Lesions.
RBBB	Right bundle branch block.
RCA	Right coronary artery.
REGRESS	Regression Growth Evaluation Statin Study.
RESTORE	Randomized Efficacy Study of Tirofiban for Outcomes and Restenosis.
RIMA	Right internal mammary artery.
RITA	Randomized Intervention Treatment of Angina.
RWMA	Regional wall motion abnormality.
€S	Scandinavian Simvastatin Survival Study.
SBP	Systolic blood pressure.

List of Abbreviations

SES	Sirolimus-eluting stents.
SHEP	Systolic Hypertension in the Elderly Program.
SOS	Stent Or Surgery.
SPECT	Single photon emission computed tomography.
STRESS	The American Stent Restenosis study.
SVG	Saphenous vein graft.
Syst-Eur	Systolic Hypertension in Europe.
TG	Triglycerides.
TIMI	Thrombolysis In Myocardial Infarction.
TLC	Total leucocytic count.
TLR	Target lesion revascularization.
TNT	Treating to New Targets.
TOR	Target of rapamycin.
t-PA	Tissue plasminogen activator.
TRACE	Trandolapril in patients with Reduced Left Ventricular Function After Myocardial Infarction.
TVF	Target vessel failure.
TVR	Target vessel revascularization.
U.A.	Uric acid.
UKPDS	United Kingdom Prospective Diabetes Study.
VA-HIT	Veterans Affairs – High Density Lipoprotein Cholesterol Intervention Trial.
Val-PREST	Valsartan for Prevention of Restenosis after Stenting.
VCAM-1	Vascular cell adhesion molecule-1.
VLDL-C	Very low density lipoprotein cholesterol.
WHO	The World Health Organization.
WRIST	The Washington Radiation for In-Stent Restenosis Trial.

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