approach and was evaluated by an observer blinded to the MSCT results.

Results: The diagnostic accuracy of MSCT for the detection or exclusion of significant stenosis in grafts body and their anastomotic sites was 99.28%, sensitivity, specificity, positive and negative predictive values were 97.75%, 100%, 98.95%. The diagnostic accuracy for detection of degree of graft stenosis (mild, moderate, severe or occluded) was 97.18%.

Conclusion: Noninvasive MSCT angiography is an excellent tool for evaluating patency or degree of stenosis of bypass grafts body and their anastomotic sites in post-CABG patients.

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Differentiation between atrioventricular reentrant tachycardia (AVRT) and AV nodal reentrant tachycardia (AVNRT)

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Differentiation between atrioventricular reentrant tachycardia (AVRT) and AV nodal reentrant tachycardia (AVNRT) can be sometimes challenging in the EP lab. RV pacing during SVT produces progressive QRS fusion before QRS morphology becomes stable. This fusion zone (FZ) may differentiate AVRT from AVNRT independent of entrainment success. PPI-TCL during RV entrainment can help in differentiation; however it has some fallacies and limitations. We thought to compare the accuracy of atrial preexcitation (AP) & Stimulus to atrial (S-A) interval fixation in relation to fusion zone in identifying the mechanism of SVT.

We studied retrospectively and prospectively the effect of properly timed RVP on atrial timing during FZ. 118 SVT patients had RVP within 40 ms shorter than tachycardia cycle length (TCL). S-A interval and atrial CL were measured during FZ and with each QRS complex thereafter. A fixed S-A interval was defined as variation <5 ms during RVP & AP is the first change in atrial CL >10 ms.

9 patients were excluded due to cycle length oscillation >10 ms before the onset of RVP and 6 patients had atrial tachycardia (VA dissociation with RVP) and were excluded. In the remaining 103 patients, PPI-TCL was significantly longer in AVNRT patients but postpacing response couldn’t be assessed in 12 patients who showed consistent termination of tachycardia during RVP entrainments; 3 AVNRT patients (5%) & 9 AVRT patients (22%). And when assessed it was not diagnostic in additional 4 (6%) patients with AVNRT (<115 ms) & 7 PPI-TCL in identifying the mechanism of SVT (100%, 92.4% and 84.8% consecutively).

We can conclude that during RVP within 40 ms of the tachycardia cycle length, fixed S-A interval and AP in relation to FZ were superior to PPI-TCL measurement in identifying the mechanism of SVT.


Glycosylated hemoglobin (HBA1c) levels as follow-up for restenosis clinical outcomes after coronary artery stenting in patients with diabetes mellitus

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Background: Diabetes has been shown to be independent predictor of restenosis after percutaneous coronary intervention (PCI). Diabetes mellitus has been proved to be a strong risk factor for in-stent restenosis. Restenosis after stent implantation remains the “Achilles’heel” of PCI, and patients with diabetes still have poorer clinical outcomes compared to non-diabetics. 1

Objective: (Aim of work) The aim of the present study is to evaluate whether the level of HbA1c as an indicator for the glycaemic control in diabetic patient is related to major cardiovascular events during the follow up in diabetic patients after percutaneous coronary intervention (PCI – stenting).

Methods: This study included 60 patients with diabetes 41 patient on oral hypoglycemic agent and 19 patient on insulin at the time of the study. These patients included 44 male (73.3%) and 16 female (26.7%) with mean age 56.48 ± 7.8 years. All patients were subjected to stress thallium at the end of follow-up period (24 month) or at the occurrence of the cardiac events. Follow-up HbA1c were performed before stenting and every 6 month till the end of follow-up period. In the study, 30 non-diabetic patients, who underwent stenting, were enrolled as control.

Results: Regarding the duration of diabetes mellitus (in years), patients who had cardiac events had longer duration of DM than who did not (12.83 ± 6.8, 8.17 ± 3.3 yrs with p-value = 0.002).

LDL level was lower in the patients who had no cardiac events than who did (123.67 ± 22.5 mg/dl with p-value = 0.01). While patients who had cardiac events were on shorter duration of diabetes mellitus than those who did not (9.7 ± 6.8 month, 16.4 ± 7.0 month with p-value < 0.01).

Regarding the HbA1c levels, HbA1c in the patients with cardiac events was ≥7% while in the none cardiac event patients was ≤7% with p-value < 0.01. Also, HbA1c during stenting was higher than HbA1c during follow-up in the whole diabetic group (9.12 ± 1.67%, 7.45 ± 2.0% with p-value < 0.01).
Conclusion:

- In diabetic patients undergoing coronary artery stenting, patients with HbA1c levels ≤7% may have lower risk of restenosis and have better clinical outcome after PCI at 2-year follow-up.
- Clopidogrel may reduce the risk of restenosis in diabetic patients who underwent coronary artery stenting when used for more than 12 month or more (12–24 month).

References


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DNA content in children with congenital heart disease

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Background: CHD represents the most important component of pediatric cardiovascular diseases. It has a high risk of morbidity and mortality in newborns and infants, were considered as multifactorial diseases. However genetic factors were considered as a cornerstone of their etiology. The DNA content represents the nuclear genomic concentration. It is affected by several multifactors.

Objective: The aim of our study was to determine the DNA content in particular common congenital heart disease. To detect the correlation between their DNA content and the chromosomal pattern as well as with the hemodynamic aspect of CHD.

Material and methods: The present study was subjected on 30 children suffering from the most common CHD and accordingly classified into three groups; 1St (VSD) 2nd (TOF), 3’ (D-TGA), each included 10 cases with specific criteria and equally gender distribution, and ten healthy age matched children as control group. All studied groups were subjected to thorough clinical, functional, structural and hemodynamic cardiac assessment as investigated via electrocardiogram, cardiac X rays, full echocardiography, and cardiac catheterization studies. Also full chromosomal, cytogenetic and DNA content studies were applied.

Results: The value of structural and numerical chromosomal aberrations was found to be significantly higher in cyanotic congenital heart disease (CCHD) than that of acyanotic congenital heart disease (ACCHD). Current study revealed that there was a highly significant correlation between the incidence of the chromosomal aberrations both structural and numerical as well as the aging and the mean values of DNA content of CHD. Also there was highly significant decreased in DNA content values in CHD in comparison to control group and the affection in DNA content of (CCHD), was more aggressive than in (ACCHD). However there was non significant relation between DNA content and the hemodynamic and function aspect of CHD.

Conclusion: DNA content of CHD was highly significant reduced. It is affected by the incidence of chromosomal aberrations, aging and the cardiomyocytic apoptosis.

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Drug eluting balloons in femoro-popliteal artery disease

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Background: Treatment of femoropopliteal artery disease by percutaneous transluminal angioplasty (PTA) is limited by high rates of restenosis (40% to 60%) 6 to 12 months after procedure. The high mechanical stress (bending, compression, torsion) that occurs in the femoropopliteal arteries with normal patient movement is associated with an increased risk for stent fractures and in-stent restenosis. Furthermore, the reduction of restenosis seen with drug-eluting stent treatment of coronary artery disease was not observed in several studies of drug-eluting stent use in femoropopliteal artery disease. Hence, an alternative stent-free therapy that may similarly reduce restenosis and improve clinical outcome has been sought.

Objectives: To review the recent clinical trials using drug-eluting balloons (DEB) in treatment of femoropopliteal artery disease.

Methods: There are four already finished randomized studies in patients with superficial femoral artery lesions investigating the efficacy of paclitaxel release by DEB. Currently there is a rapidly increasing clinical study program using DEB in different locations and indications.

Results: All 4 trials demonstrated significantly improved patency rates at 12 and 24 months angiographic follow-up compared to standard PTA. DEB offer several advantages compared to drug eluting stents, since any stentless technology for improving long-term patency is preferable to overcome the drawbacks of stenting in this mobile segment.

Conclusions: DEB technology has demonstrated the capacity to have a significant impact on the practice of percutaneous cardiovascular interventions in the future. Several clinical trials have demonstrated promising early and mid-term results in treating femoropopliteal lesions. Long-term results, exact indications, and optimal applications are yet to be determined.

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Early detection of left ventricular dysfunction in asymptomatic diabetic patient using strain and strain rate echocardiographic imaging

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Background/aim: Diabetic cardiomyopathy is defined as left ventricular dysfunction that occurs independently of coronary artery disease, and hypertension. The aim of this study is to investigate early alterations in left ventricular systolic and diastolic functions in patients with type 2 diabetes mellitus using strain and strain rate echocardiography compared with normal subjects.

Patients and methods: he present study enrolled forty subjects. They were divided into two groups: Group (1): Patients with only type 2 diabetes mellitus (20 Patients).Group (2) Normal Subjects as controls (20 Patients).All patients of type 2 diabetes mellitus according to the WHO criteria treated with oral hypo glycemic drugs. Mean age of diabetic patients. All patients of type 2 diabetes mellitus (20 Patients). Group (2) Normal Subjects as controls (20 Patients). All patients of type 2 diabetes mellitus according to the WHO criteria treated with oral hypo glycemic drugs.

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