

## CRT-116

### Impact of Alcohol on Coronary Artery Spasm as assessed with Intracoronary Acetylcholine Provocation Test

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**Background:** There are limited data regarding impact of chronic alcohol use on vasospastic angina. We evaluated the impact of alcohol use on coronary artery spasm (CAS) as assessed with intracoronary acetylcholine (Ach) provocation test.

**Methods:** A total 3034 consecutive patients [pts, Men 1457 (48.0%), mean age 54.5±12.4 years who underwent coronary angiography with Ach provocation test were enrolled. Study population were divided into current alcoholic (912, 30.1%) vs. non alcoholic (2101, 69.2%) groups. Significant CAS was defined as transient >70% luminal narrowing with chest pain and/or ST segment changes.

**Results:** Baseline clinical characteristics were balanced except non alcoholic had more hypertension (49.3% vs. 40.4%, P<0.001), diabetes (13.6% vs. 10.2%, P=0.009), peripheral vascular disease (6.3% vs.3.0%, P<0.001), history of CVA (3.5% vs.2.1%, P=0.041), congestive heart failure (2.0% vs.0.5%, P=0.004) whereas alcoholic group were mostly men (76.5% vs.35.8%,P<0.001) and had more current smokers (42.8% vs. 13.8%,P<0.001). Although the alcoholic group showed higher incidence of myocardial bridge, Ach induced CAS, and severe narrowing on QCA on univariate analysis, however, after adjusting the baseline differences, all clinical and angiographic parameters of Ach provocation test were not different between the two groups (Table).

**Conclusions:** In our study, current alcohol use was not associated with clinical and angiographic characteristics of CAS as assessed with Ach provocation test.

Table. Clinical and angiographic parameters of the study groups

Variables, n (%)	Non alcoholic: (n=2101 pts)	Alcoholic: (n=912 pts)	P value (Univariate)	P value (Multivariate)
EKG changes	81 (3.8)	37 (4.05)	0.793	0.715
Chest pain	963 (45.8)	408 (44.7)	0.578	0.216
Ach induced spasm >70%	1213(57.7)	565(62.0)	0.031	0.181
<b>Angiographic narrowing by QCA</b>				
<50%	78 (3.7)	33(3.6)	0.900	0.510
50-70%	541 (25.7)	218 (23.9)	0.284	0.816
>70%	594 (28.3)	314 (34.4)	0.001	0.337
<b>Number of vessels:</b>				
Single vessel spasm	773 (36.8)	364 (39.9)	0.105	0.103
Multi vessel spasm	440 (20.9)	201 (22.0)	0.449	0.789
Diffuse spasm(>20 mm)	1004 (82.8)	457 (80.9)	0.334	0.426
Myocardial bridge	387 (18.4)	228 (25.0)	<0.001	0.066

## CRT-117

### Combined Intracoronary Ergovine and Acetylcholine Provocation Test for Assessment of Significant Coronary Artery Spasm

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**Background:** Ergovine(Erg) and Acetylcholine (Ach) is an useful agent for assessing significant coronary artery spasm (CAS). However, clinical data regarding combined or simultaneous intracoronary provocation test using these two agents are largely unknown.

**Methods:** A total 113 consecutive patients (pts) underwent Erg and/ or Ach provocation test were enrolled. Erg test was performed by incremental doses of 5, 10, 25ug. If Erg test is (-), subsequent Ach test was done by 20, 50, 100ug. Significant CAS was defined as focal or diffuse severe transient luminal narrowing (>70%) with/without chest pain or ST-T change on ECG. We investigated the overall results of simultaneous Erg and Ach provocation test.

**Results:** Baseline clinical characteristics showed that mean age was 53.18 ± 9.8 years old (male 69.3%), hypertension 48.7%, diabetes 6.1%, dyslipidemia 12.2% and smoking

34.6%. A total 49pts (49/113, 43.4%) showed (+) provocation test by Erg. Sixteen % of the pts responded to E2 dose (10ug) and 83.6% to E3 (25ug). Multivessel spasm was in 32.7%, and diffuse spasm 16.3%. A total 64 pts who were (-) to Erg test underwent Ach provocation test. A total 60 pts (60/64, 93.8%) showed (+) provocation test by Ach. Eleven % of the pts responded to A1 dose (20ug) and 35.0% to A2 (50ug). Multivessel spasm was in 47.5%, and diffuse spasm 8.3%. Only 4 pts (4/113, 3.5%) were (-) response to both Erg and Ach test.

**Conclusion:** Both Erg and Ach were safe but Ach was more sensitive and Erg seems to be more specific to show significant CAS.

## CRT-118

### Serum Neutrophil Gelatinase-associated Lipocalin (ngal) In Diabetic Patients With Renal Impairment Patients Undergoing Elective Coronary Angiogram In University Malaya Medical Centre

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Serum NGAL as a biomarker for subclinical contrast induced nephropathy (CIN) in diabetic patients with renal impairment at 24 hours post coronary catheterization.

**Background:** Serum NGAL has been shown to be a novel biomarker for acute kidney injury. Studies done previously showed that serum NGAL level peak at 4 hours after the administration of a contrast agent as opposed to serum creatinine. Recently the term 'subclinical acute kidney injury' plays an important role, as it increases morbidity and mortality. Using serum NGAL as a marker, we aim to uncover the incidence of subclinical CIN on a population of diabetic patients with renal impairment undergoing elective coronary angiogram in Cardiology Unit University Malaya Medical Centre.

**Objectives:** To evaluate incidence of subclinical CIN in diabetic patients with renal impairment undergo elective coronary angiogram using new and conventional biomarker.

**Methodology:** This is a prospective study of 70 consecutive patients who fulfilled the following inclusion criteria:

1. Elective admission for coronary angiogram.
2. Stage 3 & 4 diabetic CKD with MDRD equation.
3. Not on nephrotoxic drug 48 hours prior to the study.

The blood samples were taken at 0H; 4H and 24H post coronary angiogram and sent for serum creatinine (sCr) and NGAL measurement using Alere Triage® NGAL Test.

**Results:** Out of the 70 samples taken, 25.7% received intravenous saline infusion and oral N-acetyl-cysteine (NAC) for CIN prophylaxis. Mean age of the patients was 66.8 ± 4.7 years with mean estimated GFR of 45.3 ± 13.6 mls/min/1.73m<sup>2</sup>. Twelve point eight percents (12.8%) patients were diagnosed as CIN based on increment 25% serum creatinine from the baseline. There was a significant raised of serum NGAL at 4 hours after contrast administration in 77.1% of the patients without raised serum creatinine suggesting subclinical acute kidney injury. The magnitude of NGAL increment was significantly lower in the groups receiving CIN prophylaxis (4.8 ng/ml vs 42.3 ng/ml, p < 0.001), suggestive protective effect of prophylaxis.

**Conclusion:** Serum NGAL level is a useful acute clinical marker for CIN post coronary angiogram in high-risk patients as the level raised as early as 4H compared to serum creatinine. Our high-risk cohort has 77.1% incidence of subclinical AKI, higher compared to previous study. Patients who received CIN prophylaxis had lesser magnitude of tubular injury compared to those who were not given.

## CRT-119

### Mortality Predictive Value Of Cystatin C In Patients With Heart Failure

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**Introduction:** Frequency and gravity of heart failure (HF) led to the need for precise risk stratification. The association with renal failure worsens the prognosis. Cystatin C, an accurate glomerular filtration rate (GFR) marker, may have a prognostic value in heart failure patients.

**Aim:** To evaluate the mortality predictive value of Cystatin C in patients with HF.