



Selected Women Cardiac Care (WCC) Abstracts

ABSTRACT 1

Percutaneous Trans-ulnar Arterial Approach for Coronary Angiography and Interventions: A Retrospective Analysis of 150 Cases

Neelam Kaul¹, Suresh Kaul¹

¹Department of Cardiovascular Sciences, Amandeep Hospital, Pathankot, Punjab, India.

Corresponding author E-mail: drneelamkaul@yahoo.co.in

Objectives: The trans-radial route has established itself as a safe and effective alternative to the femoral route for coronary diagnostic and therapeutic interventions. We studied the ease and challenges of the trans-ulnar approach in coronary procedures.

Material and Methods: We studied 150 cases of trans-ulnar procedures, and assessed the success rates of the puncture, its challenges, incidence of loops and spasms, use of 7F sheaths and guiding catheters, and the frequency of crossover to another route. We also studied the effect of dominance on arterial preference while performing procedures through the wrist.

Results: Ulnar artery dominance was tested with palpation and arterial Doppler. The mean diameter of the right ulnar artery was 2.56 ± 0.32 mm. The incidence of loops and tortuosity's was found in 2.3% of patients. The incidence of spasms in the ulnar artery was 0.6%. Some challenges that were seen more commonly in the ulnar route were accessibility for a puncture, hematomas, tingling, and paresthesias secondary to inadvertent infiltration of the local anesthetic in the ulnar nerve, and post-procedure compression.

Conclusion: The trans-ulnar route is a safe and effective alternative to the radial approach in coronary diagnostic and interventional procedures. The principle of arterial dominance at the wrist is a good way to select an access route. With fewer tortuosities, loops, and spasms, and bigger size, the ulnar route can be the first choice for coronary interventions through the hand/wrist.

ABSTRACT 2

A Clinical and Angiography Study of Conduction Blocks in Acute Coronary Syndrome in Women Compared to Men

John Meshack Bandela¹, Adilakshmi Bhyravavajhula¹, Srinivasa Rao Malladi¹

¹Department of Cardiology, Andhra Medical College, King George Hospital, Visakhapatnam, Andhra Pradesh, India.

Corresponding author E-mail: meshackjohn@gmail.com

Objectives: Limited studies are available describing the association between conduction disturbances and coronary artery disease (CAD) in women undergoing coronary angiography (CAG). Hence, uncertainty thrives with regard to the angiographic pattern of CAD in women compared to men. The objective was to study the pattern of CAD among women in comparison to men who are undergoing CAG for CAD with different conduction abnormalities.

Material and Methods: A total of 120 study patients were included over 1 year from Andhra Medical College, King George Hospital, Vizag, of which 60 were male patients and 60 were female patients, who were diagnosed with CAD. The CAG was performed in both groups which included classification of pathological coronary anatomy, qualitative assessment of flow, and stenosis severity. Pathological coronary anatomy was classified into four types (Type I: Anatomy not compromising blood supply to the conduction system, either the absence of significant narrowing in left anterior descending (LAD), right circumflex artery (RCA), left circumflex artery, postero-lateral, or posterior descending artery or presence of mid-distal LAD lesions past the septal branches. Type II: Pathological coronary anatomy involving septal branches emerging from LAD (and without significant lesions in the RCA). Type III: Pathological coronary anatomy compromising blood supply to the sinoatrial (SA) or atrioventricular (AV) node but not compromising blood flow to the septal branches. This subset included patients with distal LAD lesions after the septal branches. Type IV: Combinations of types II and III- Pathological coronary anatomy that compromises blood supply to both the septal branches and to the SA or AV branch.) (Courtesy of AAS Majumdar, Cardiovascular Journal 2012).

Results: Obesity was more common among female patients 16 (26.6%) than males 12 (20%) patients. The conduction blocks were common among those aged >55 years of age. The post-menopausal women had more conduction blocks than premenopausal women patients. Anterior wall myocardial infarction was slightly more in females than in male patients. LAD was the most commonly affected coronary artery territory (Female- 49 patients- 81.6%; and Male - 47 patients - 78.3%) on angiography. The severity of LAD and RCA was found identical in both males and females. Type 4 lesion (33.3%) was found to be a common lesion. The flow quality was found to be poor in patients who had type 4 lesions, ($P = 0.01$).

Conclusion: The incidence of conduction blocks and angiographic lesions is slightly higher in females than in males. Women are generally older at presentation and suffer more frequently from adverse events. According to this study, the location of lesions rather than diffuse coronary atherosclerosis might be responsible for a subset of patients with conduction disturbances.

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ABSTRACT 3**Gender Differences and Incidence of Young Acute Coronary Syndrome in Pre and Post-COVID Pandemic**S. Sathish¹, Cecily Mary Majella¹, G. Karthikeyan¹¹Department of Cardiology, TNGMSSH Omandurar, Chennai, Tamil Nadu, India.

Corresponding author E-mail: sathishskmc@gmail.com

Objectives: Although acute coronary syndrome (ACS) primarily affects patients over the age of 45, it can also affect young women and men. The severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) causing COVID-19 reached pandemic levels in March 2020 and has caused repeated waves of outbreaks across the globe.

Material and Methods: The observational study was conducted at a Tertiary Care Hospital in South India from January 2018 to December 2023. All the young patients admitted for chest pain aged >18 years and <45 years were included in the study. ST-elevation myocardial infarction, non-ST-elevation myocardial infarction, and unstable angina was diagnosed by clinical evaluation, serial electrocardiograms (ECGs), serial biomarkers, and echocardiography.

Results: Out of 10,842 patients in the past 6 years, 2457 patients were young ACS (22.66%), out of which 600 were female (24.4%). Pre-COVID (2018–2020) total 4095 cases, out of which 897 were young (21.9%) patients; out of young, 180 were female (20.06%) patients. POST-COVID (2021–2023) total cases 6747, out of which 1560 were young (23.12%) patients; out of young, 420 were female (26.9%) patients. The incidence was recorded as, in 2018, out of 1657, 315 were young (19%) patients; out of young, 72 were females (22.8%) patients; in 2019, out of 1632, 380 were young (23.2%) patients; out of young, 86 were females (22.6%) patients; in 2020, out of 806, 202 were young (25%) patients; out of young, 22 were females (10.8%) patients; in 2021, out of 1605, 480 were young (29.9%) patients; out of young, 72 were females (15.0%) patients; in 2022, out of 2474, 564 were young (22.7%) patients; out of young, 180 were females (31.9%) patients; in 2023, out of 2668, 516 were young (19.3%) patients; and out of young, 168 were females (32.5%) patients.

Variable	2018–2020	2021–2023	Total	Chi-square test	P-value
Young MI (Men+Women)	897 (36.5%)	1560 (63.5%)	2457 (100%)	8.95	0.003
Young MI (Women)	180 (30.0%)	420 (70.0%)	600 (100%)		

MI: Myocardial infarction

Conclusion: After the COVID-19 pandemic era, the total incidence of ACS increased drastically, especially among young individuals aged <45; out of which the incidence of MI in young women also increased.

ABSTRACT 4**Gender Differences in Angiographic Profile of Patients Referred with STEMI as part of STEMI Project to a Tertiary Care Center, King George Hospital, Cardiology**Balla Naga Malli Kumar¹, Adilakshmi Bhyravavajhula¹, Srinivasa Rao Malladi¹¹Department of Cardiology, Andhra Medical College, King George Hospital, Visakhapatnam, Andhra Pradesh, India.

Corresponding author E-mail: bnmkumar01@gmail.com

Objectives: The objectives of the study were to find the gender difference of coronary artery disease (CAD) patients, we selected patients from the Andhra Pradesh ST-elevation myocardial infarction (STEMI) project (spoke and hub model) in collaboration with STEMI India.

Material and Methods: This is an observational study of STEMI patients referred from spoke centers and who underwent coronary angiography from August 29, 2023 to January 31, 2024 at King George Hospital, Visakhapatnam. The data regarding demographic characteristics, coronary risk factors (smoking, hypertension, and type 2 diabetes mellitus), other comorbidities (body mass index), and angiographic profile of patients were collected, tabulated, and analyzed.

Results: A total of 63 STEMI patients were included in the study. Among them, 41 patients (30 [73.2%] males and 11 [26.8%] females) were thrombolysed at spoke centers and referred, whereas 22 patients (12 [54.5%] males and 10 [45.5%] females) were not thrombolysed due to out of window period presentation. Among risk factors, hypertension is the most common risk factor in women, whereas smoking is the most common risk factor in men compared to women with statistical significance ($P < 0.05$). When compared to men left main coronary artery (LMCA) + triple vessel disease (TVD) and TVD involvement is more in women with statistical significance ($P < 0.05$)

	Male n (%)	Female n (%)
SVD	16 (38)	8 (38)
DVD	15 (35.7)	3 (14)
TVD	3 (7.1)	5 (23)
LMCA+SVD	1 (2.3)	0
LMCA+DVD	3 (7.1)	0
LMCA+TVD	2 (4.7)	3 (14)
Mild CAD	2(4.7%)	2 (9)

SVD: Single vessel disease, DVD: Double vessel disease, TVD: Triple vessel disease, LMCA: Left main coronary artery, CAD: Coronary artery disease

When compared to men LMCA+TVD and TVD involvement is more in women with statistical significance ($P < 0.05$).

Conclusion: When compared to men, patients not thrombolysed due to late presentations are more in women, even though it is not statistically significant. When compared to men LMCA+TVD and TVD involvement is more in women with statistical significance ($P < 0.05$).

ABSTRACT 5**Clinical and Angiographic Profile of Women with Heart Failure with Reduced Ejection Fraction**Allu Harshavardhini¹, Adilakshmi Bhyravavajhula¹, Srinivasa Rao Malladi¹¹Department of Cardiology, Andhra Medical College, King George Hospital, Visakhapatnam, Andhra Pradesh, India.

Corresponding author E-mail: harshaallu89@gmail.com

Objectives: Heart failure (HF) is estimated to affect 64.3 million people globally, with prevalence being significantly higher in women globally. The overall lifetime risk of HF is similar between men and women, however, there are marked sex differences that are important and under-recognized.

Material and Methods: This study is a single-center cross-sectional observational study of women with HF with reduced ejection fraction (HFrEF) admitted to a cardiac care unit at a tertiary care center in 1 year. Of all the women admitted with HF, those with reduced ejection fraction were taken up for the study and their clinical characteristics such as age, risk factors (hypertension, diabetes, obesity, and smoking), and angiographic profile were studied.

Results: Among the women admitted with HF patients (105 females), 51 patients had HFrEF (<40%) (48%). More than half of them were more than 55-years-old. Of all the women with HFrEF, 28 patients were hypertensive (54%), 18 patients had diabetes mellitus (35%), 3 patients had history of exposure to tobacco (0.05%), and 25 patients were obese (41%). Of the women with HFrEF, 38 patients had significant coronary artery disease (CAD), four patients had cardiomyopathy, eight patients had valvular heart disease, and one patient with other cause (myxoma). Study of the angiographic profile of women with HFrEF patients revealed the cause to be significant CAD (the most common artery involved being left anterior descending) in 38 women patients of which 25 patients underwent percutaneous transluminal coronary angioplasty and 13 patients underwent coronary artery bypass grafting and four patients had dilated cardiomyopathy with normal coronaries. When compared with males with HFrEF, women were more likely to be older, obese, and hypertensive.

Suggestion: To be able to manage HFrEF in women patients adequately, there must be more representation of women in clinical trials as well as collaboration for the development of sex-specific management guidelines.

Conclusion: Sex impacts almost every facet of HF, from epidemiology and risk factors to pathophysiology, response to therapy, and ultimately outcomes. Sex modifies the association of several traditional risk factors with HF.

ABSTRACT 6

Assessment of Incidence and Severity of Cardiotoxicity of Chemotherapeutic Drugs and Means for its Early Identification

Arulanandhan Ettiyan¹, R. Kannan¹, S. Raghothaman¹, P. Suresh Kumar¹

¹Department of Cardiology, Government Chengalpattu Medical College and Hospital, Chengalpattu, Tamil Nadu, India.

Corresponding author E-mail: dr.arulanandhancyr@gmail.com

Objectives: Chemotherapy especially with anthracyclines and also with many other drugs may lead to varied expressions of reversible or permanent cardiovascular damage which every physician treating cancer patients should know. The objective is to identify the incidence and onset of systolic/diastolic dysfunction during chemotherapy and postulate methods to reduce it.

Material and Methods: This is a prospective, single-center study enrolling 100 consecutive patients who were diagnosed with cancer before starting chemotherapy in Government Chengalpattu Medical College hospital from April 2022 to December 2023. All patients enrolled underwent 2D echocardiography before starting chemotherapy (base time – T₁) on the day after the completion of a 2nd cycle chemotherapy (T₂), post-treatment 4th cycle (T₃), and 6 months after the post-treatment (T₄). Biomarker screening is done during 2nd cycle of chemotherapy. Troponin I and B-type natriuretic peptide (BNP) levels were screened. 2D echocardiography was performed by an experienced cardiologist and results were cross-checked by another cardiologist who was double-blinded about the study.

Results: It showed that the mean age of the subjects was 45.2 ± 8.80 years. Out of all the subjects male 10%, female – 90 % had cancer. Out of 90 females, 78 (86.66%) patients had carcinoma breast and 12 (13.33%) patients had other cancer. Out of 78 patients, 27 (34.6%) patients had carcinoma right breast, and 51 (65.38%) had carcinoma left breast. Risk factors included were systemic hypertension 7% and diabetes mellitus – 10 %, and obesity – 6%. Among markers estrogen receptor, and progesterone receptor were positive in 26 (33.33%) patients, and human epidermal growth factor receptor 2 was positive in 27 (34.61%) patients. Electrocardiography (ECG) changes such as ischemic changes were noted in 3 (3.33%) patients, and premature ventricular complexes were noted in 4 (4.44%) patients. Among biomarkers 45 (50%) patients had elevated Troponin I and 38 (42.22%) patients had elevated brain natriuretic peptide (BNP)

The following are the echocardiographic findings

Left ventricular (LV) diastolic dysfunction- 31 patients (34.4%)

LV systolic dysfunction- 05 patients (5.55%)

Right ventricular dysfunction- 05 patients (5.55%)

Pericardial effusion- 04 patients (4.44%)

Left ventricular ejection fraction (LVEF) decreased mainly after the treatment. LV systolic dysfunction is impaired after the completion of cycles. However, LV diastolic dysfunction started mostly during 2nd cycle of chemotherapy and remains the same after the 4th cycle of chemotherapy and 6 months after the therapy.

Conclusion: Even though the systolic dysfunction starts with 4th cycle, diastolic dysfunction on echo starts as early as the 2nd cycle of chemotherapy.

ABSTRACT 7

Incidence and Risk Factors of In-stent Restenosis after Percutaneous Interventions in Patients at Tertiary Care Center

Lingampally Sanjana Reddy¹, Adilakshmi Bhyravavajhula¹, Srinivasa Rao Malladi¹

¹Department of Cardiology, Andhra Medical College, King George Hospital, Visakhapatnam, Andhra Pradesh, India.

Corresponding author E-mail: sanjanareddy.lingampally@gmail.com

Objectives: In-stent restenosis (ISR) remains a challenge for coronary artery disease patients who undergo percutaneous coronary intervention (PCI) with stents and risk factors for ISR are controversial. This study is aimed to investigate the incidence and risk factors of ISR in patients at our hospital.

Material and Methods: In this retrospective study, patients diagnosed with acute coronary syndrome (ACS) and underwent successful percutaneous coronary intervention (PCI) and conducted follow-up coronary angiography for symptomatic coronary artery disease at the Department of Cardiology, King George Hospital for a period of 1 year, that is, January 1, 2023, to December 31, 2023, were included for analysis. The clinical angiographic factors were compared between patients in the ISR (+) and ISR (-) groups. The association between variables and ISR was evaluated by a multivariate logistic regression model.

Results: A total of 106 ACS patients who have been installed at least 1 stent were included in this study. The follow-up time was 46 ± 6 months. During the follow-up period, 30 patients experienced ISR and the average time for ISR was 36 months, the incidence of ISR for left main coronary artery, left anterior descending, left circumflex artery, and right circumflex artery were 0%, 40%, 6.7%, and 20%, respectively. Stent diameter and drug compliance were significantly different between patients in the ISR (+) and ISR (-) groups. Multivariate logistic analysis suggested that stent numbers were significantly correlated with ISR.

Conclusion: Our study revealed the incidence and risk factors of ISR in patients undergoing PCI and stent number, stent diameter, and time of follow-up are independent risk factors associated with ISR.

ABSTRACT 8

Clinical Presentation of Prosthetic Valve Complications in Women from Tertiary Care Center

Dheeraj Bhargav¹, Adilakshmi Bhyravavajhula¹, Srinivasa Rao Malladi¹

¹Department of Cardiology, Andhra Medical College, King George Hospital, Visakhapatnam, Andhra Pradesh, India.

Corresponding author E-mail: dheerajbhargav18@gmail.com

Objectives: Treatment of native valvular heart disease has resulted in an increasing number of patients with prosthetic heart valves. Although an improvement over the diseased native valve removed at the surgery has been done, due to the prosthetic valve's suboptimal hemodynamics complications of the prosthetic valve occur at a rate of 2–3%/patient-year. Complications include thromboembolism, endocarditis, valve dysfunction, and bleeding secondary to anticoagulation. The objective is to study the clinical presentation of prosthetic valve complications in women over 6 months.

Material and Methods: Clinical data of 40 prosthetic valve replaced women patients were collected throughout 6 months duration. Aimed to study the clinical presentation of prosthetic valve complication depending on the site of valve replaced (aortic valve vs. mitral valve vs. dual valve), associated comorbidities (diabetes, hypertension), a dose of anticoagulation (vitamin K antagonist) presence of coronary artery bypass grafts, and frequency of recurrent admissions.

Results: In the study conducted the major complications are valve thrombosis (40%) presenting as acute left ventricular dysfunction followed by bleeding complications (50%) due to high dose anticoagulation followed by infective endocarditis (2%) and thromboembolic stroke (2%).

Conclusion: In this study, it can be concluded that the highest complication is prosthetic valve thrombosis (PVT) leading to left ventricular dysfunction, and the least is thromboembolic stroke. Dual valve replacement has been associated with the highest number of PVTs.

ABSTRACT 9

Gender Differences in Ventricular Septal Rupture in Pre-COVID, and Post-COVID Pandemic: A Comparative Analysis

N. Ravikanth¹, J. Cecily Mary Majella¹, G. Karthikeyan¹, S. Suriyakanth¹

¹Department of Cardiology, TNGMSSH Omandurar, Chennai, Tamil Nadu, India.

Corresponding author E-mail: kanthrav1994@gmail.com

Objectives: The incidence of ventricular septal rupture (VSR) is 1–3% of ST-elevation myocardial infarction (STEMI) in the pre-reperfusion era and 0.17–0.31% in post-primary percutaneous coronary intervention. During the COVID and post-COVID period, there was an increased incidence of VSR, the clinical profile and gender differences over the last 7 years (pre-COVID and post-COVID pandemic) are discussed in this article.

Material and Methods: It is an observational study. To study the incidence, gender differences, and outcomes of VSR in STEMI patients pre-COVID (2017–2019) and during and post-COVID pandemic (2020–2023). Data were pooled from three tertiary care centers in Tamil Nadu.

Results: The incidence of VSR pre-COVID (2017–2019) was 5 patients (24%). Incidence of VSR during and post-COVID (2020–2023) was 16 patients (76%). There is a three-fold increase in the incidence of VSR during and post-COVID pandemic ($P < 0.05$). Among the 21 patients, 11 were males (52%) and 10 were females (48%). 50–70 years of age (24%). Incidence of VSR was higher in females >70 years of age (34%). All patients were referred but surgery was deferred and hence VSR device closure was done for four selectively suitable patients. Among the 21 VSR cases, 17 patients are no more and 4 patients are still alive. Among the four patients who are still alive, two have undergone device closure and the other two patients have lost follow-up.

Conclusion: There was a three-fold increase in the incidence of VSR during and the post COVID period than the pre-COVID period. Incidence was almost equal in both genders. Even though the incidence of VSR was almost equal in both sexes, early mortality was higher in females.

ABSTRACT 10

Gender Differences in the Assessment of Risk Factors of Patients Presenting with Acute Coronary Syndrome with Coronary Artery Thrombus in Angiography

S. R. L. K. Varshini¹, Adilakshmi Bhyravavajhula¹, Srinivasa Rao Malladi¹

¹Department of Cardiology, Andhra Medical College, King George Hospital, Visakhapatnam, Andhra Pradesh, India.

Corresponding author E-mail: varshinibhatla54@gmail.com

Objectives: In acute coronary syndrome (ACS), coronary thrombus with or without underlying lesions is the feature. We wanted to study the known risk factors involved in coronary thrombus initiation such as smoking, diabetes mellitus, hypertension, and hyperlipidemia in our study population.

Material and Methods: This retrospective observational study was conducted in the Department of Cardiology, Andhra Medical College, Visakhapatnam, from January 2018 to September 2023. Among 3,500 cases presenting with ACS, 245 cases had thrombus in coronary arteries during Coronary angiography. The clinical and angiographic data of these patients were analyzed. Clinical data analysis included age, sex, mode of presentation, vital data, height, and weight. The presence of comorbidities such as hypertension, diabetes mellitus, and dyslipidemia, and any history of smoking or tobacco consumption was taken into consideration.

Results: In our study, we analyzed 3500 cases, of which 245 patients had coronary artery thrombus constituting 0.07% of cases. Of all the 245 patients, 22% were females. The mean age of presentation is 53 years. Of these, 38% were diabetic, 50% were hypertensive, and 12% had a history of smoking. The majority of the patients presented with ST-elevation myocardial infarction (STEMI) (50 cases - 94%), 2 cases with Non-STEMI (4%), and 1 case with unstable angina (2%). Of the 50 STEMI cases, 27 patients presented with inferior wall myocardial infarction (54%) and 23 patients presented with anterior wall myocardial infarction (46%).

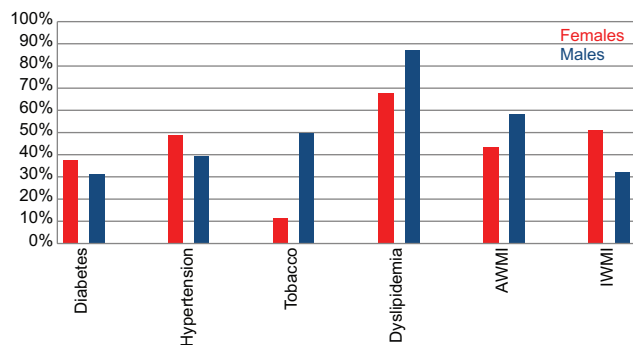


Figure showing sex-related differences in clinical profiles of patients with coronary artery thrombus presenting with ACS.

Conclusion: In comparison to men, the incidence of coronary artery thrombus in women was less and the age of presentation was slightly higher. There is an increased prevalence of hypertension and diabetes in females compared to males (39% hypertensive and 32% diabetic) with coronary artery thrombosis. Dyslipidemia is present in the majority of the patients in both sexes. The left anterior descending artery was most commonly involved followed by the right coronary artery.

ABSTRACT 11

The Angiographic Profile of Treadmill Test Positive Women with Diabetes Mellitus and Without Diabetes Mellitus Presented at Tertiary Care Center

Vamshi Krishna¹, Adilakshmi Bhyravavajhula¹, Srinivasa Rao Malladi¹

¹Department of Cardiology, Andhra Medical College, King George Hospital, Visakhapatnam, Andhra Pradesh, India.

Corresponding author E-mail: vamshianthubhatla@gmail.com

Objectives: For coronary artery disease (CAD) exercise electrocardiogram (ECG) remains the recommended test of first choice for the assessment of symptomatic, women who can exercise and have normal findings on a resting ECG, even though this is not true in female patients with atypical presentations. This study aims to analyze the angiographic profile in treadmill test-positive women along with the diabetic subpopulation, presenting with chest pain at King George Hospital, Visakhapatnam.

Material and Methods: It is an observational study conducted at our hospital from January 01, 2021 to December 31, 2023. In 40 patients of treadmill-positive females, Angiographic findings were noted, and the findings among diabetic and non-diabetic populations in that sample. The data were analyzed by Statistical Package for the Social Sciences 25.0 Version.

Results: Of 40 treadmill-positive females, 19 were with diabetes and 24 were without diabetes. Out of 19 diabetic females with treadmill test positivity 4 had normal coronaries and 15 had coronary artery disease. In 21 non-diabetic females with treadmill test positivity 18 normal coronaries were in the angiography.

Conclusion: In this study, female patients with suspected CAD, to the treadmill test positivity, diabetes adds to increase the sensitivity of detecting CAD.

ABSTRACT 12

Factors Leading to Delayed Arrival of Women with Acute Coronary Syndrome to the Hospital

Ravi Kumar¹, Adilakshmi Bhyravavajhula¹, Srinivasa Rao Malladi¹

¹Department of Cardiology, Andhra Medical College, King George Hospital, Visakhapatnam, Andhra Pradesh, India.

Corresponding author E-mail: ravikumar@gmail.com

Objectives: Acute myocardial infarction is the leading cause of death worldwide. The process of infarction takes several hours to progress. If intervention is done during this time, it is possible to salvage the myocardium. Hence, the phrase “minutes mean muscle.” The objective is to determine the frequency of various factors of delayed arrival of women with acute coronary syndrome (ACS) to the hospital.

Material and Methods: This is a descriptive study conducted at the Department of Cardiology, Andhra Medical College, Visakhapatnam, from December 2023 to February 2024. Fifty women patients with ACS were interviewed for information about the time of onset of symptoms and past medical history. The demographic data and the time of arrival to the Emergency Room (ER) were noted from the hospital records. The nature of symptoms and the subsequent events up to the arrival at the ER of cardiology were inquired about and the cause of delayed arrival was determined. All the data obtained were analyzed using Statistical Package for the Social Sciences version 25.0.

Results: Misinterpretation of symptoms was the chief factor for delayed hospital arrival (44%) followed by consulting a local medical practitioner (28%), waiting for the symptoms to subside with treatment at home (14%), living in an area far away from any hospital (10%), and lack of transport (4%).

Conclusion: Lack of awareness of ischemic symptoms, wasting time by going to local clinics, and logistic difficulties are the chief factors causing delayed hospital arrival in patients with ACS.

ABSTRACT 13

Prosthetic Valve Thrombosis in Women Treatment Outcome: Case series

J. Sudarshan Reddy¹, Adilakshmi Bhyravavajhula¹, Srinivasa Rao Malladi¹

¹Department of Cardiology, Andhra Medical College, King George Hospital, Visakhapatnam, Andhra Pradesh, India.

Corresponding author E-mail: jyothi_matam@yahoo.in

Objectives: Prosthetic valve thrombosis (PVT) is a dreadful complication of mechanical prosthetic valves. Thrombolytic therapy (TT) for PVT is an alternative to surgery. This case series compares TT with tenecteplase (TNK) and streptokinase (STK).

Material and Methods: In this single-center, observational study, patients with PVT diagnosed by clinical data, transthoracic echocardiography, and fluoroscopy were included. We studied PVT in 10 patients with 12 episodes of PVT. After excluding patients with contraindications for thrombolysis, patients received either STK or TNK infusion. Patients were monitored for success or failure (depending on the gradients decrease across the prosthetic valve and mobility of the leaflets on fluoroscopy) of TT with TNK, and STK drugs.

Results: The average age of the study population was 32 years. In 12 episodes of PVT, 9 episodes received STK and 4 episodes of PVT received TNK. In 2 patients TNK was given initially due to hemodynamic compromise, after failure within 48 h STK was given. STK infusion therapy success rate is 90% compared with TNK infusion success rate of 72% ($P = 0.02$).

Conclusion: STK infusion therapy for PVT is the first-line of therapy where the immediate surgical options are remote.

ABSTRACT 14

An Observational Study on Electrocardiographic and Angiographic Correlation in Localising the Culprit Vessel in Acute ST-Segment Elevation Myocardial Infarction in Men and Women at Tertiary Care Center

Baji Varaprasad¹, Adilakshmi Bhyravavajhula¹, Srinivasa Rao Malladi¹

¹Department of Cardiology, Andhra Medical College, King George Hospital, Visakhapatnam, Andhra Pradesh, India.

Corresponding author E-mail: jbvp43@gmail.com

Objectives: The definite diagnosis of myocardial infarction (MI) and the exact site of occlusion is made by coronary angiography but an electrocardiogram which is an easily available and non-invasive investigation plays an important role in the diagnosis and treatment of MI. The objective of this study is to study the electrocardiographic and angiographic correlation in localizing the culprit vessel in acute ST-segment elevation myocardial infarction (STEMI).

Material and Methods: This is a prospective, observational study conducted at King George Hospital, Visakhapatnam. The inclusion criteria are the patients who presented with acute STEMI, and the patients who have undergone coronary angiography. Patients who fulfill the above criteria and who have elevated cardiac markers will be diagnosed with MI and immediately admitted to the intensive cardiac care unit and receive immediate treatment according to the standard protocol. Angiography study to be done within 15 days of admission. A total number of 70 consecutive patients who were diagnosed with STEMI was analyzed.

Results: In inferior wall MI electrocardiogram (ECG) criteria of ST-segment elevation in lead III more than the ST segment elevation in lead II and ECG criteria of ST-Segment depression in lead aVL more than the ST segment Depression in lead I were able to predict the occlusion site in right circumflex artery (RCA) Accurately. (Specificity was 91.9% and 94.6%, respectively). In AAMI with left anterior descending (LAD) occlusion electrocardiography (ECG) criteria of STsegment elevation by ≥ 2.5 mm in lead V1, ST-segment elevation in lead aVR, ST segment depression in lead II, III, aVF, and right bundle branch block (RBBB) predicted the occlusion level in proximal LAD accurately. (Specificity was 89.7%, 89.7%, 86.2%, and 100%, respectively). In the anterior wall, MI with LAD occlusion ECG criteria of isoelectric ST Segment in inferior leads was able to localize the occlusion site in distal LAD. (Specificity was 84.4%). Triple vessel disease was predominantly seen in men.

Conclusion: In our study of 70 patients with acute STEMI the established electrocardiographic criteria for the diagnosis of RCA occlusion detection was with the specificity of 91.9% and LAD occlusion with a specificity of 89.7% in inferior and anterior MIs, respectively, angiographically.

ABSTRACT 15

Patterns of Dyslipidemia among Acute Coronary Syndrome in Female Patients at a Tertiary Care Hospital

Bhargava Chatla¹, Adilakshmi Bhyravavajhula¹, Srinivasa Rao Malladi¹, Teppa Santosh Kumar¹

¹Department of Cardiology, Andhra Medical College, King George Hospital, Visakhapatnam, Andhra Pradesh, India.

Corresponding author E-mail: bhargavchatla3@gmail.com

Objectives: Dyslipidemia refers to the presence of abnormalities in lipid parameters. It has become a global issue with a high risk of cardiovascular diseases. The investigation aimed to find out the pattern and prevalence of dyslipidemia among patients with acute coronary syndrome (ACS).

Material and Methods: This is a descriptive study conducted at the Department of Cardiology, Andhra Medical College, Visakhapatnam, from December 2023 to February 2024. Data were collected using convenient sampling from 100 patients presenting with ACS within 24 h of admission, during a 3-month period from December 2023 to February 2024 at our hospital. Dyslipidemia is diagnosed by testing the lipid profile when there are one or more abnormal readings of the lipid profile.

Results: Nearly 41 (41%) had ST-segment elevation myocardial infarction (STEMI), 21 (21%) had non-ST segment elevation myocardial infarction (NSTEMI), and 38 (38%) were categorized as unstable angina (USA). Overall dyslipidemia was present in 84 (84%) patients. The prevalence of dyslipidemia was 37% in female patients. Dyslipidemia was present in 39 (90.7%) patients with STEMI, 25 (80.6%) in the USA, and 20 (74.1%) with NSTEMI.

Conclusion: The prevalence of dyslipidemia was quite high among ACS patients. The proportion of obese patients was also high in our study. However, dyslipidemia was more frequent in overweight patients.

ABSTRACT 16

A Study of Myocardial Infarction in Women

Lomada Jagadeeswar Reddy¹, Adhilakshmi Bhyravavajhula¹, Teppa Santosh kumar¹, Gudivada Jenny Madhuri¹

¹Department of Cardiology, Andhra Medical College, King George Hospital, Visakhapatnam, Andhra Pradesh, India.

Corresponding author E-mail: jagadeeswarreddy23@gmail.com

Objectives: Myocardial infarction (MI) is acute cardiac disability arising from the reduction or arrest of blood supply to the myocardium due to atherosclerotic lesions of the coronaries. Cardiovascular disease remains the leading cause of death in women regardless of race or ethnicity. To study the clinical profile of MI in women admitted to our hospital from December 2023 to February 2024.

Material and Methods: Sixty-five women patients with acute MI were studied. They were divided into two groups, namely, premenopausal women and postmenopausal women. Presenting symptoms and physical signs were noted. History of diabetes mellitus, prolonged hypertension, tobacco use in the form of smoking or chewing, oral contraceptive use, obesity/dyslipidemia, and family history were noted. Patients were managed appropriately and were observed for the development of complications if any during the hospital stay. They were treated accordingly. All the data obtained were analyzed using Statistical Package for the Social Sciences version 25.0.

Results: In this study, among 65 female patients with MI with the mean age group of 45 years, 14 are less than 45 years of age and 51 are more than 45 years. Multiple risk factors were seen in all the members in the premenopausal group, 14 (27.5%) out of 51 postmenopausal women had no risk factors. Mortality was seen in 5 (7.69%) out of 65 patients. One (7.14%) out of 14 premenopausal women and 4 (7.84%) out of 51 postmenopausal women died. Mortality was higher in the 56–65 year age group.

Conclusion: The incidence of MI is more common in postmenopausal women than premenopausal women. The multiplicity of risk factors was higher in premenopausal women. Complications and mortality were on the higher side in women.

ABSTRACT 17

Prevalence of STEMI in Diabetic Women Versus Diabetic Men and their Angiographic Profile: A Comparative Study

P. Harini¹, Santhosh Kumar¹, Adilakshmi Bhyravavajhula¹, M. Srinivas¹

¹Department of Cardiology, Andhra Medical College, King George Hospital, Visakhapatnam, Andhra Pradesh, India.

Corresponding author E-mail: harinip200@gmail.com

Objectives: The most common cause of ST-segment elevation myocardial infarction (STEMI) across the world is type 2 diabetes mellitus (T2DM), and in about 40–50% of cases myocardial infarction is the initial presentation in the Indian scenario. The study aims to analyze the angiographic profile and to observe if any difference between diabetic women and men presenting with STEMI to King George Hospital (KGH), Visakhapatnam.

Material and Methods: It is an observational study conducted at King George Hospital (KGH), Visakhapatnam from January 01, 2023 to December 31, 2023 who was admitted for ST elevation Myocardial Infarction (STEMI) to our hospital. The data were analyzed by the Statistical Package for the Social Sciences 25.0 version and applied Fischer's exact test.

Results: In 50 patients of STEMI with T2DM (25 Male vs. 25 Female patients) angiographic findings were noted and compared among diabetic females and diabetic males in the sample. In 50 STEMI with T2DM patients, the incidence of triple vessel disease (TVD) is higher in female diabetics with a significant *P*-value ($P = 0.001$). The incidence of double vessel disease or single vessel disease among diabetic men and diabetic women are not different ($P = 0.5$). Post thrombolysis for diabetic STEMI patients, none had recanalized vessels on angiogram.

Conclusion: There is a significantly higher incidence of TVD in diabetic females versus diabetic males ($P = 0.001$). Even though there is limited data, it showed angiographically failed thrombolysis in diabetic patients in the form of no recanalized vessel.