

# ACC.22

## AMERICAN COLLEGE OF CARDIOLOGY



# DAY 2



**Tazloc-Beta**  
Telmisartan 40mg + Metoprolol Succinate 25mg/50mg



**Tazloc**  
Telmisartan 20mg/40mg



**Tazloc-CT**  
Telmisartan 40/80 mg + Chlorthalidone 12.5 mg



# HIGHLIGHTS

## OF THE DAY

1

### **Effects of Alirocumab on Coronary Atherosclerosis Assessed by Serial Multimodality Intracoronary Imaging in Patients with Acute Myocardial Infarction: A Double-blind, Placebo-controlled, Randomized Trial (PACMAN AMI)**

Raber L

Raber L, presented the findings from the PACMAN AMI trial that assessed the effect of early administration of the proprotein convertase subtilisin/kexin type 9 alirocumab on top of high-intensity statin therapy on coronary plaque characteristics, assessed by 2-vessel serial multimodality intracoronary imaging in patients with acute myocardial infarction (AMI) throughout 52 weeks. **Alirocumab initiated in patients with AMI on top of high-intensity statin therapy demonstrated a greater reduction in percent atheroma volume (PAV), a greater reduction in lipid burden, and a higher increase in minimal fibrous cap thickness after 52 weeks of treatment compared to placebo.**

2

### **Magnitude & Duration of Effects of a Short-interfering RNA Targeting Lipoprotein(a): A Placebo-controlled, Double-blind, Dose-ranging Trial (APOLLO Trial)**

Nissen S

Nissen S, presented the APOLLO trial which included patients aged 18-70 years without evidence of atherosclerotic cardiovascular disease and a lipoprotein(a) level of  $\geq 150$  nmol/L (equivalent to approximately 60 mg/dL). Each cohort with 8 participants (6 active and 2 placebo) was administered ascending doses of SLN360 or placebo at 30, 100, 300, or 600 mg subcutaneously. Effects were assessed at multiple time points for the first 24 hours and during follow up for 150 days. Median lipoprotein(a) levels were 224 nmol/L. Subcutaneous injection of an siRNA (SLN360) targeting mRNA for the LPA gene lowered lipoprotein(a) upto 98%.  $>70\%$  and  $>80\%$  reductions in Lp(a) persisted for 150 days after the 300 mg and 600 mg doses resp. The highest doses reduced LDL-C and Apo-B by 20-30%. The findings support further development of the therapy.

3

### **Patiromer for the Management of Hyperkalemia in Subjects Receiving Renin-angiotensin-aldosterone System Inhibitor Medications for Heart Failure with Reduced Ejection Fraction: Results from the DIAMOND Trial**

Butler J

Butler J, presented the DIAMOND trial in which 1642 patients were screened and finally 878 patients were equally randomised to patiromer and placebo with average follow-up of 266.6 days. Patiromer showed significantly lesser increase in serum K<sup>+</sup> levels as compared to placebo (+0.03 vs +0.13) ( $p < 0.001$ ). Patiromer had lesser no. of hyperkalemia events than placebo (61 vs 85) ( $p = 0.006$ ). Lesser no. of patients with patiromer had reduction of MRA dose below target (61 vs 83) ( $p = 0.006$ ). **Patiromer maintained lower serum K<sup>+</sup> levels. Patiromer was associated with lower incidence of hyperkalemia events and greater proportion of patients being maintained on MRA at target doses. Patiromer lead to 35% relative risk reduction in total number of hyperkalemia events.**

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**Tazloc-AM**  
Telmisartan 40/80 mg + Amlodipine 5 mg



**Tazloc-H**  
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# HIGHLIGHTS

## OF THE DAY

4

### **Consumer-led Screening for Atrial Fibrillation: A Report from the MAFA-II Trial Long-term Extension Cohort**

Guo Y

Guo Y, presented the findings from the MAFA-II trial which was conducted to report the long-term outcome of consumer-led screening for atrial fibrillation (AF) in the general population. Among 2,852,217 participants with compatible smart devices, 12,244 participants were received the notification of suspected AF. The proportion of suspected AF was 0.64% (165/25782) in 2018, 0.38% (2878/751341) in 2019, 0.47% (4862/1040043) in 2020, and 0.42% (4339/1035051) in 2021, respectively ( $p < 0.001$ ). **The trial concluded that the consumer-led screening approach with photoplethysmography-based smart devices identified AF with good accuracy, which increased early diagnosis of AF and facilitated AF integrated care.**

5

### **Artificial Intelligence: New Ways of Diagnosing Valvular Heart Disease**

Elias P

Elias P, presented a session on artificial intelligence as a new way of diagnosing valvular heart disease (VHD). Electrocardiograms (ECGs) cannot detect aortic stenosis; therefore there is a need to develop learning models which analyse ECGs to detect patients with left-sided moderate or severe ventricular heart disease as determined by ECG. Steps taken to develop the artificial intelligence technology to detect early VHD involves conducting multicentre retrospective validation studies, actively enrolling 200 patient, prospective diagnostic trial in patients with no history of VHD, and studying the cost-effectiveness of wide-scale population testing. **The session introduced IntroECG – a full-process library for deep learning with cardiac data and imaging on 12-lead ECGs.**

6

### **New Agents to Lower Triglyceride-Rich Lipoproteins**

Tokgozoglu L

Tokgozoglu L, presented a session emphasizing on the new agents to lower triglyceride-rich lipoproteins (TGRL). Current interventions to lower TGRL include lifestyle and management of other risk factors, low-density lipoprotein (LDL) reduction with a high-intensity statin, TGRL lowering therapies (Icosapent ethyl, fibrates). **ANGPTL 3 and Apoprotein C III inhibition are promising therapies for severe hypertriglyceridemia. These pharmacological approaches reduce triglycerides more than conventional therapies and with less frequent dosing.**

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7

### The Polypill for Global Cardiovascular Disease Prevention

Munoz D

Munoz D, presented a session discussing the clinical perspective on the use of a polypill for global cardiovascular disease (CVD) prevention. Current approaches to CVD prevention include high-risk strategy and population strategy; delivery of therapy still remains a challenge. A polypill is a once-daily, fixed-dose combination, low-cost generic medication. The goal is to improve patient care and clinical outcomes by simplifying delivery. **Despite therapeutic advances in CVD prevention, the disease burden remains in the vulnerable population. Tackling global CVD prevention with polypill (population-based strategy) may offer key relative advantages in adherence and consequent risk reduction.**

8

### The Health Burden of Hypertension in Asia: An Update on the World's Largest and Most Populous Continent

Yang E

Yang E, shared insights on the health burden of hypertension in the world's largest and most populous continent – Asia. More than 600 million people with hypertension live in Asian countries, with higher stroke rates associated with hypertension in East Asia and ischemic heart disease more common in South Asia. Obesity and metabolic syndrome increase salt sensitivity. **The conclusions stated that Asians have greater salt sensitivity, blood pressure variability, and nocturnal hypertension. Asians are likely to develop pre-hypertension and hypertension at lower body mass index (BMI) and with similar BMI increments than Europeans. Hypertension rates continue to increase and cardiovascular disease rates differ by region.**

9

### Resistant Hypertension Increases the Risk of Hospitalization in Patients with Hypertrophic Cardiomyopathy

Bhat S

Bhat S, presented a study that sought to assess the impact of apparent treatment resistant hypertension (RH) on outcomes among patients with hypertrophic cardiomyopathy (HCM). 247 patients were studied, including 41 patients with HCM. Patients with HCM were divided into 1 of 3 groups based on a diagnosis of normotension, hypertension, or resistant hypertension. Among patients with HCM, 79% patients had hypertension and 22% had resistant hypertension. **The study concluded that resistant hypertension is a risk factor, beyond non-resistant hypertension, for hospitalization among patients with hypertrophic cardiomyopathy.**

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10

### Effects of Habitual Coffee Consumption on Incident Cardiovascular Disease, arrhythmia, and Mortality: Findings from UK Biobank

Chieng D

Chieng D, presented the findings from a study that aimed to evaluate the associations between coffee intake and incident arrhythmia, cardiovascular disease (CVD), & mortality, utilizing the UK Biobank – a large prospective cohort with outcomes measured >10 years. Coffee intake of 2-3 cups/day demonstrated lowest risk for CVD and all-cause mortality. Stroke and cardiovascular mortality risk were lowest at <1 cup/day. **The findings stated that regular coffee intake, particularly at 2-3 cups/day, was associated with significant reductions in incident arrhythmia, CVD and mortality. Daily coffee intake should be considered part of a healthy diet.**

11

### Gaps in Guideline-based Lipid-lowering Therapy for Secondary Prevention in the United States: A Nationwide Analysis of 227,824 Patients

Kolkailah A

Kolkailah A, discussed the guideline-based lipid-lowering therapy for the secondary prevention of atherosclerotic cardiovascular disease (ASCVD). Of the included 227,824 patients with ASCVD, 41.2% were on appropriate statin therapy, 31.1% were on lower-than-recommended therapy, and 26.7% were on no statin. **The analysis suggests that the clinical utilization of non-statin lipid-lowering therapy (LLT) was low across all the groups. Over half of patients with ASCVD were not on guideline-recommended appropriate statin therapy, few were utilizing evidence-based non-statin LLT, and many were utilizing non-evidence-based LLT.**

12

### Sleep Apnea and ASCVD Risk: The Role of the CV Provider

Somers M

Somers M, provided an informative session on sleep apnea and atherosclerotic cardiovascular disease (ASCVD) risk: the role of the cardiovascular (CV) provider, and shed light on what's new in this association, particularly screening, diagnosis, and therapy. **The conclusion stated that there are disparities in prevalence, diagnosis, treatment, and outcomes; home sleep apnea test (HSAT) is a good diagnostic tool for obstructive sleep apnea (OSA), comorbidity does not imply mortality; and high-risk subgroups may be most responsive to therapy.**

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