CIMSRE Daily

CIMSRE
Care Institute Medical Society for Research and Education

GMERS Medical College, Sola, Ahmedabad
Association of Physicians of Ahmedabad
Gujarat Forensic Sciences University, Gandhinagar
American Association of Physicians of Indian Origin (AAPI)

Friday, January 4, 2013 - Day-1

Editorial Board :

Scientific Editors :

Dr. Keyur Parikh

Dr. Parloop Bhatt

Today's Highlights

- Plenary Lectures
- DEBATE-1 : Assessment of CAD
- DEBATE-2 : Mild HTN : To Treat or Not to Treat

Satellite Sessions

- Pharmacology & Therapeutics - I
- Pharmacology & Therapeutics – II
- Cardiology Guidelines – I
- Cardiology Guidelines – II
- Peripheral/Endovascular/Structural Disease

TODAY'S WEATHER

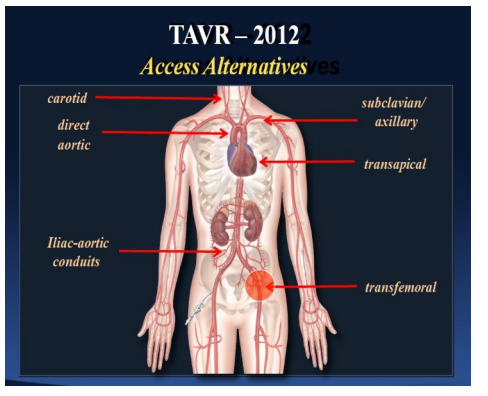
Sunrise : 7.21 AM

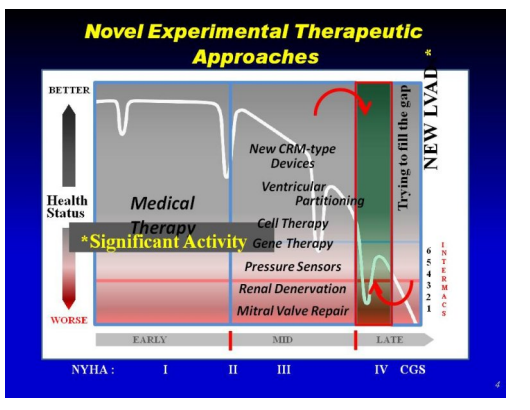
Sunset : 6.07 PM

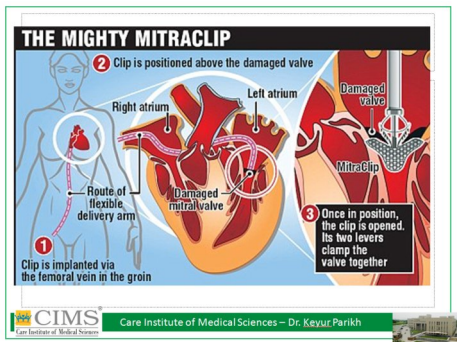
Max
28°C

Min
9°C

Rise of Cardiovascular Medicine as Perceived by Keyur Parikh



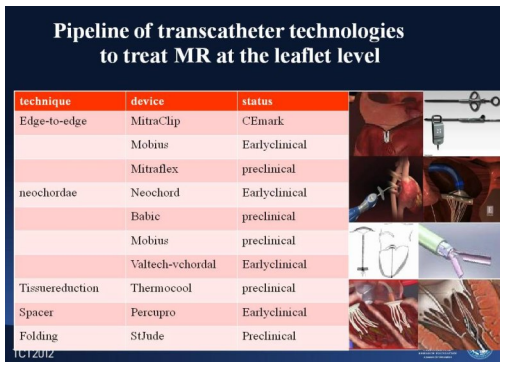


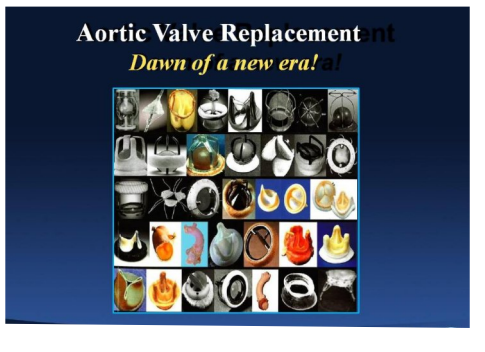


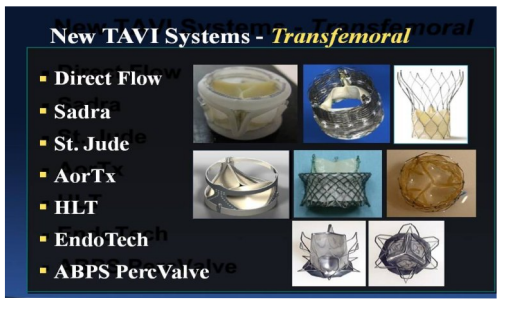
Keyur Parikh,
Conference Chairman

Welcomes all the conference delegates to the 9th Annual Scientific Symposium, 18th years of academics.

Cardiovascular disease will no longer exist as a threat. The principal role of the cardiologist will change from recognizing and managing established disease, as is the case today, to interpreting and applying genetic information in prevention and treatment in 2020 and beyond.







Milan Chag Discusses Decisive Cardiology Trials of 2013

(1) Cardiovascular benefits and diabetes risks of statin therapy in primary prevention: an analysis from the JUPITER trial: Lancet 2012; 380: 565–71)
In the JUPITER primary prevention trial, the cardiovascular and mortality benefits of statin therapy exceed the diabetes hazard, including in participants at high risk of developing diabetes.

(2) Strategies for Multivessel Revascularization in Patients with Diabetes The FREEDOM Trial Investigators: (N Engl J Med 2012, Nov 7)
For patients with diabetes and advanced coronary artery disease, CABG was superior to PCI in that it significantly reduced rates of death and myocardial infarction, with a higher rate of stroke.

(3) Prasugrel versus Clopidogrel for Acute Coronary Syndromes without Revascularization The TRILOGY ACS Investigators (N Engl J Med 2012; 367:1297-309)
Among patients with unstable angina or myocardial infarction without ST-segment elevation, prasugrel did not significantly reduce the frequency of the primary end point, as compared with clopidogrel, and similar risks of bleeding were observed.

(4) Basal Insulin and Cardiovascular and Other Outcomes in Dysglycemia The ORIGIN Trial Investigators: (N Engl J Med 2012; 367:319-28)
When used to target normal fasting plasma glucose levels for more than 6 years, insulin glargine had a neutral effect on cardiovascular outcomes and cancers. Although it reduced new-onset diabetes, insulin glargine also increased hypoglycemia and modestly increased weight.

(5) Warfarin and Aspirin in Patients with Heart Failure and Sinus Rhythm The WARCEF Investigators: (N Engl J Med 2012; 366:1859-69)
Among patients with reduced LVEF who were in sinus rhythm, there was no significant overall difference in the primary outcome between treatment with warfarin and treatment with aspirin. A reduced risk of ischemic stroke with warfarin was offset by an increased risk of major hemorrhage. The choice between warfarin and aspirin should be individualized.

CIMSRE Daily

Friday, January 4, 2013 - Day-1

Evidence Based Medicine: Statin: Weighing the Evidences

Anish Chandrana

Statins have been quite useful treatment to optimize various lipid parameters and reduce cardiovascular events and mortality in various groups of patients. There has been sizable data in many patient populations and data is not as robust in few other patient population. Though some clinicians are extremely optimistic about abilities of this class of drug to minimize effects of cardiovascular epidemics, more so in countries like India, daring to state that 'statin should be mixed with municipality water tank', in real world, still many patients who need this drug remain want of it and left to suffer from very serious consequences of CAD.

Uncommonly individual specific adverse effects like significant elevations of liver enzymes, muscle pain – body aches and very rarely rhapdomyolysis have been reported. In majority of above causes temporary discontinuation or reduction in dose of statin is all what is required to resolute these adverse effects.

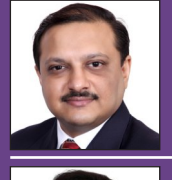
However, statin use has been found to be associated with a small increased risk of type 2 diabetes mellitus. In view of the overwhelming benefit of statins in the reduction of cardiovascular events, most clinicians believe that the small absolute risk for development of diabetes is outweighed by the cardiovascular benefits in patients for whom statin therapy is recommended, particularly when statin is used for secondary prevention.

Opinion is quite divided for use of statin for primary prevention, especially when absolute risk of CV event is less. Here the trade is prevention of approximately 4 cardiovascular events per 200 patients treated with giving 2 people new diabetes. Many questions remain and some are partially answered: What are the mechanisms? Is it specific to an agent? Has it a relation with dose and duration of treatment? Does it cause diabetes to some pre specified sub groups only like those with high BMI or those with high FBS? Does this new onset diabetes has similar consequences like if diabetes has been pre-existing? Attempts to answer all these questions will surely lead us to prescribe statin in safer way for primary prevention. At the stage over prescription of statin, particularly off label use for primary prevention of low risk patients should be avoided. And all those who receive statin should be followed for new onset of diabetes.

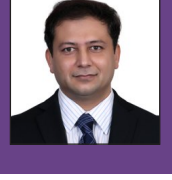
Don't Miss Today

11:15 AM Evidence Based Management: Stable Angina ***- Hemang Baxi***

11:30 AM Evidence Based Management: Who should go for Early Angiography in ACS? ***- Urmil Shah***

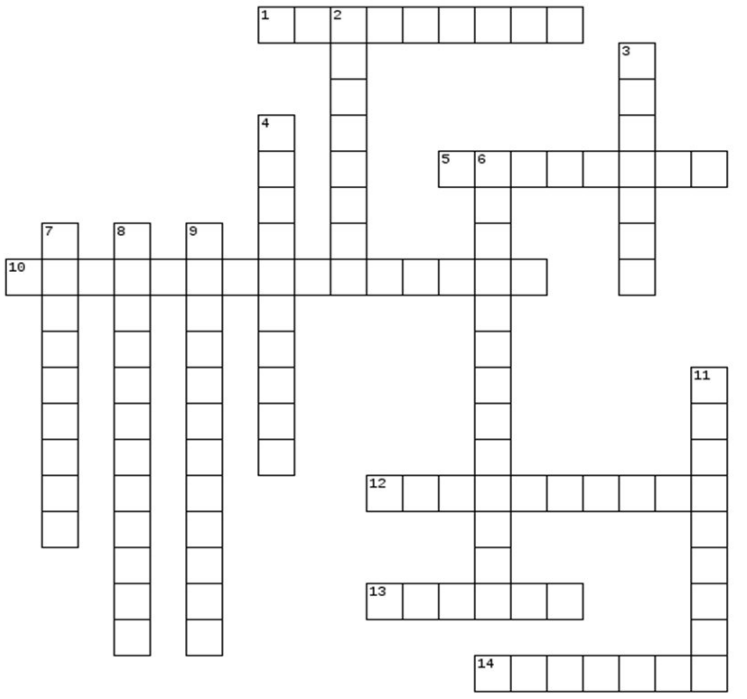


12:00 PM Evidence Based Management: Preventing SCD Post-MI ***- Ajay Naik***



2:35 PM Aortic Dissections: What Physicians Should Know? ***- Dipesh Shah***

Cross word



Across Clues

1. relieves constipation.
5. central nervous system stimulant.
10. involves the study of drug effects in the body.
12. drugs placed under the tongue.
13. promotes vomiting.
14. legal noncommercial name for a

Down Clues

2. harmful effects of a drug.
3. tube for introducing or withdrawing fluids from the body
4. condition caused by treatment given by physicians.
6. orevents clotting.
7. prepares and dispenses drugs.
8. controls anxiety and severe disturbances of behavior.
9. kills bacteria.
11. relieves pain.

Answers on Page-7

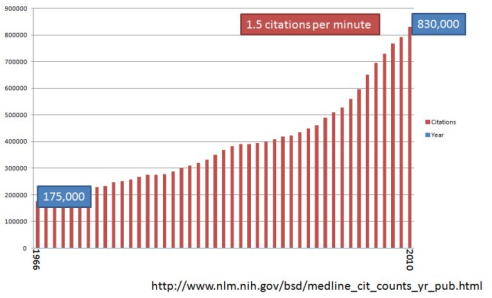
Leveraging Web 2.0 Tools for Information Management & Staying Current with Literature:

Neil Mehta

Today's physicians are facing a dual threat of information overload and shrinking half-life of knowledge. How can a busy practitioner stay up to date with current medical evidence in his or her area of interest? It is apparent that the human brain has limitations in processing this vast amount of information in a manner that is easy to retrieve at a time of need. You can feel like Karna in the epic Mahabharata when his memory fails him at a time he needs it the most.

In this session we will explore the neuropsychological basis of memory and technology tools that can assist you in staying current with literature in your area of interest or expertise. We will review concepts of working memory, transactive memory and filter failure. Using practical examples, we will review a model for a centralized online location that filters and collects information and allows you to annotate, store and retrieve it in an efficient manner. This model works on any web-enabled device and can be applied at the point-of-care. We will see a stepwise approach that will allow you to easily adopt this model in your own practice.

MEDLine Biomedical Citation Counts (by year of publication)

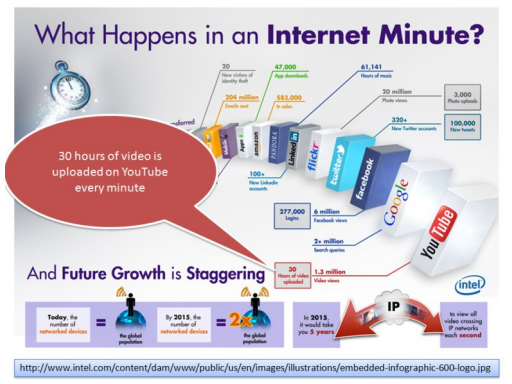


http://www.nlm.nih.gov/bsd/medline_cit_counts_yr_pub.html

Social Media & Social Networking for Life long learning : What all physician should know ?

Medical practitioners need to be lifelong learners. A vast majority of the information we need to practice medicine today, we learned "on the job", not in medical school. Medications and diseases and ways of treating them are constantly evolving. We are faced with SARS, Chikungunya, Dengue, Influenza Pandemics and the like and we will see more of these as the world becomes flatter and smaller. But there is a silver lining - we are also increasing hyperconnected and able to form global knowledge communities that can work together to develop and share approaches for treating and managing these. While Facebook, Twitter and Google Plus can seem like frivolous time sinks, they can also provide a framework for building virtual personal learning networks.

In this session we will explore the concept of Connectivism and how we can leverage social media tools to help us become lifelong learners. We will see practical examples of using social networking for synchronous case



discussion, asynchronous journal clubs and crowdsourced problem solving. The session will provide links to resources for you to learn to adopt these in your own practice.

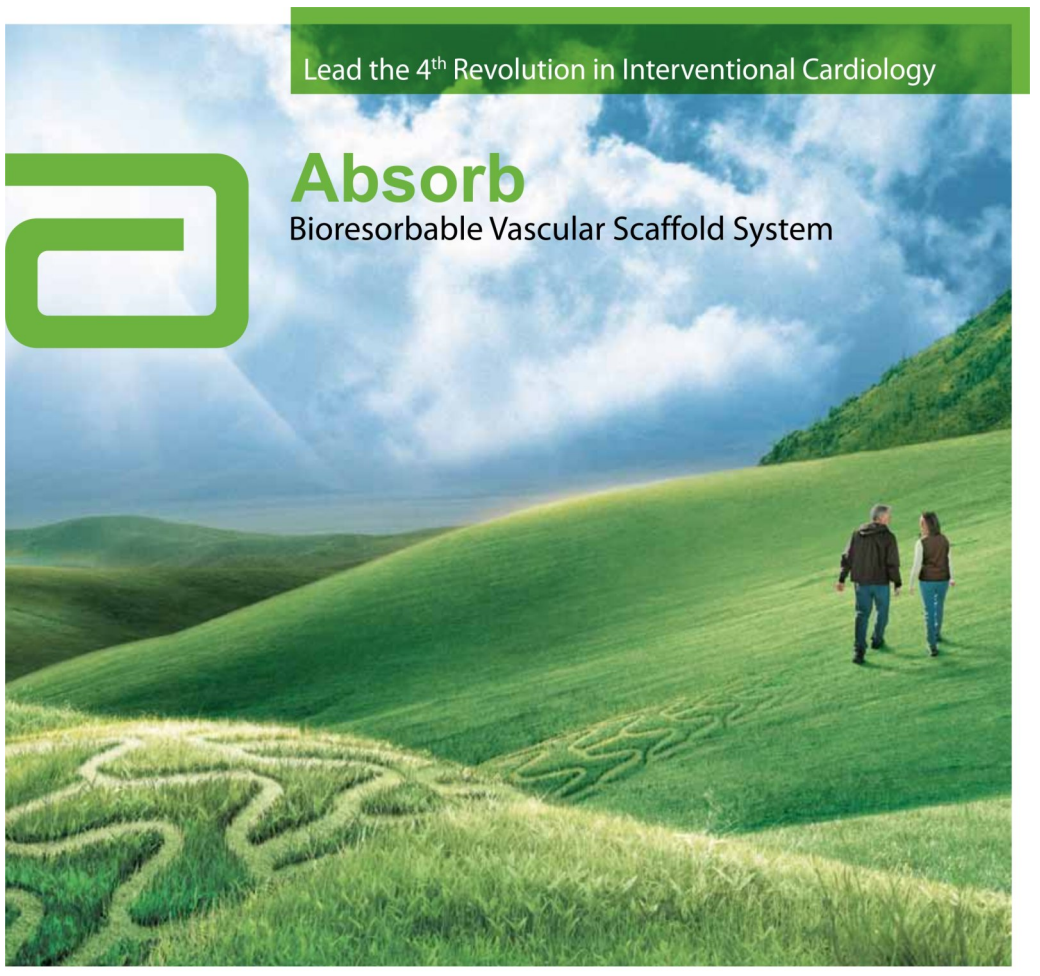
Managing your professional identity in the digital age:

In an age when "Google" has become a verb, people are increasingly looking up information on the Web for themselves rather than asking someone for an opinion. This trend is going to increase as the amount of online digital information increases, more people have smartphones with voice recognition and natural language processing apps like Siri and Google Now, and we move towards wearable computers like Google Glass.

We have traditionally told our medical trainees not to use social networking sites like Facebook in case they post something inappropriate that can hurt them in the future. Unfortunately, if we stand by the sidelines, we lose our chance to control our own digital footprint. In this session we will look at advantages of controlling your own professional identity. We will review tools and steps for actively managing and monitoring your own digital persona.

A FEW FREE THINGS TO INSTALL ON YOUR COMPUTER

- Chrome and Firefox: For a better web browsing experience.
  www.google.com/chrome
  www.getfirefox.net
- JAVA Runtime, Flash: Essential plug-ins for some websites.
  www.java.com/en/download/index.jsp
  get.adobe.com/flashplayer
- FoxIT Reader: A fast and lightweight PDF reader.
  www.foxitsoftware.com/Secure_PDF_Reader
- Picasa: Manages your photo Collection, and packs basic image editing.
  picasa.google.com
- KMPlayer: Extensive support for video codecs and has a pleasing interface.
  www.kmpmedia.net
- 7ZIP: Takes care of all your archiving needs, including ZIP and RAR.
  www.7-zip.org
- CCleaner: Keeps your PC clean and in top shape.
  www.piriform.com/ccleaner
- Skype: For all your video calling needs.
  www.skype.com
- InfraRecorder: Powerful but simple CD/DVD burning tool.
  www.infrarecoder.org



It's easy to move forward when you leave nothing behind

The dream of a bioresorbable scaffold has now become a reality. Absorb defines a new paradigm – Vascular Reparative Therapy (VRT). The goal of VRT is to restore the vessel to a more natural state, capable of normal vascular function to enable long term benefits. Leaving nothing behind* promises a bright future for interventional cardiology. Together, we can lead the revolution in patient care.

*Small platinum markers at scaffold edges remain for fluoroscopic landmarking.

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Restore Freedom

Abbott Vascular

Stem Cell Therapy for Post Infarction Repair: Where Are We?

Guy R Heyndrickx

Modern revascularization treatment for acute ST elevation myocardial infarction (STEMI) with either thrombolytic agents or primary PCI has dramatically reduced hospital mortality, yet surviving patients are more prone to develop heart failure secondary to chronic left ventricular (LV) remodeling. In order to counteract this evolution the first attempts of cellular therapy in patients with STEMI were initiated in 2000 by injecting autologous mononuclear bone marrow cells into the target coronary artery. A recent meta-analysis of 1765 patients from 33 randomized trials, treated with autologous bone marrow derived stem cells have shown only a modest improvement in LV ejection fraction of ± 3-5% which was however maintained over a prolonged period of time (12-61 months) and without effects on morbidity and mortality. A number of parameters have been identified which did influence these results: i.e. degree of baseline LV function, the absolute number of cells injected, methods of cell preparation, degree of retention of injected cells in the myocardium as well as decreased function of the bone marrow cells in some patients due to the presence of additional risk factors. In order to circumvent the potentially defective bone marrow cells, the use of allogeneic mesenchymal cells would have the advantage of functional standardization and validation as well as on the bench availability. These cells do not however differentiate into cardiac or vascular cells but most probably act through paracrine secretion of growth factors as well as cyto-protective factors. Recent trials where intracoronary infusion of cardiac stem cells or cardiosphere-derived cells, harvested from the left atrium or right ventricular biopsies have yielded some positive effects suggesting a regenerative benefit. Currently true myocardial cell regeneration is only possible with the use of embryonic pluripotent cells. This approach faces two major challenges, first the risk of tumor degeneration and second the allogeneic character of the cells with the risk of rejection. Another research avenue is the use of adult pluripotent cells which are reprogrammed to a pseudo embryonic state before being re-differentiated towards cardiac cells. This approach will avoid the ethical issues of the use of embryos but will face a potential for genetic alteration due to the reprogramming process. It is not inconceivable that in the end stem cells are acting through exclusively paracrine mechanisms.

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Answers on Page-7

Role of Physiological Assessment of Lesion Severity in Patients with MVD

Guy R Heyndrickx

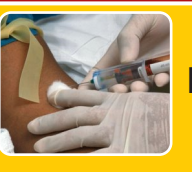
There has been a paradigm shift from anatomical to functional evaluation of lesion severity in patients undergoing PCI. In patients with 1 VD it is usual easy to determine the causal relation between angiographic obstruction and ischemic symptoms. In contrast, in MVD it is more difficult to determine the causal relation between an angiographic stenosis and flow limiting stenosis due to the limitations of coronary angiography as well as myocardial perfusion imaging. Fractional Flow Reserve (FFR) measurement has been shown to be superior in sensitivity and specificity compared to angiography and even myocardial perfusion imaging in differentiating flow-limiting from non-flow-limiting lesions. Data from the FAME trial showed that out of 1414 lesions (509 patients) classified as significant on the basis of the angiogram only 61 % proved to have a FFR ratio < 0.8. The FAME trial was initiated to answer the question whether PCI guided by FFR measurement (cut-off value: 0.80) was better than angiographic guided PCI. Routine measurements of FFR during PCI significantly reduced the rate of the primary composite endpoint of death, myocardial infarction and repeat revascularization at 1 year (18.3% versus 13.2%) and at the same time reduced the number of stents used (2.7±1.2 versus 1.9±1.3) while resulting in a similar if not improved functional result. The FAME I and II trials provide strong evidence that coronary angiography and clinical data alone are not sufficient for decision making about the appropriateness of revascularization of individual lesions in patients with MVD.

CIMS Clinic - Maninagar

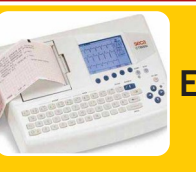
CIMS Clinic multi-departmental OPD services

- Cardiology
- Cardiothoracic and Vascular Surgery
- Vascular & Endovascular Surgery
- Pediatric Cardiology
- Pediatric Surgery
- Critical Care
- Pulmonology
- Orthopaedics & Trauma Surgery
- Oncology (Cancer)
- Oncosurgery (Cancer Surgery)
- Spine Surgery
- GI & Laparoscopic Surgery
- Neurosurgery
- Nephrology
- Hepatobiliary Surgery
- Urology
- Bariatric Surgery
- Plastic and Cosmetic Surgery
- Neurology
- Infectious Disease
- ENT

Investigative facilities



Pathology



ECG

Echocardiography

TMT

Prior appointment for all consultation is essential.

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Carotid Disease Management, Update 2012

Ashit Jain,

Advances in management of carotid stenosis have been occurring to the extent that complications are far fewer than ever before. Complications like death, major stroke are now less than 3-4% in complicated patients. Minor complications are fewer too. Options of revascularization are getting better and now we can customize revascularization procedure based on disease morphology and carotid artery anatomy. Talk will cover above issues and show you what to expect in future.

CIMS-CON 2014
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19th Year of Academics

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Lifetime Academic Event not to be Missed

CIMS-CON is proud to announce its association with American Association of Physicians of Indian Origin (AAPI) for CIMS-CON 2014

Book your dates for 2014

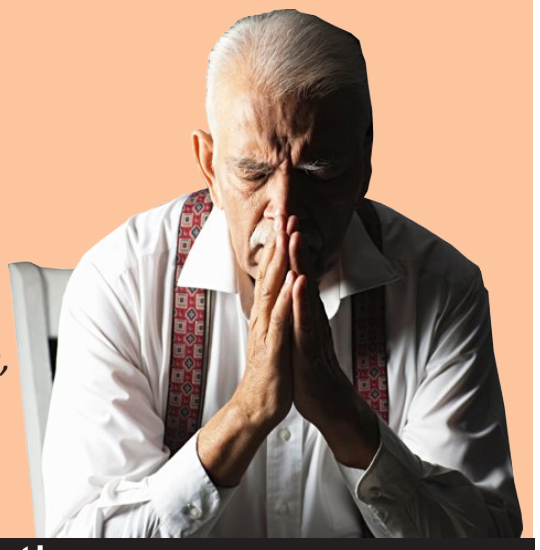
Special Discounted Registration
₹ 2,500/- only*
(*Offer valid till March 31, 2013)

SUPER EARLY BIRD REGISTRATION

The first 1000 registered delegates will all get a GIFT

CIMS HTN (Hypertension) Clinic

High blood pressure is a common condition in which the force of the blood against your artery walls is high enough that it may eventually cause health problems, such as heart disease, stroke, kidney failure & blindness.



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Dr. Gunvant Patel	(M) +91-98240 61266
Dr. Keyur Parikh	(M) +91-98250 26999
Dr. Milan Chag	(M) +91-98240 22107
Dr. Urmil Shah	(M) +91-98250 66939
Dr. Hemang Baxi	(M) +91-98250 30111

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For appointment call :
+91-79-3010 1200, 3010 1008
Mobile : +91-98250 66661 or
email on opd.rec@cims.me

New Strategies for Management of Hypertension

Frank van Leeuwen

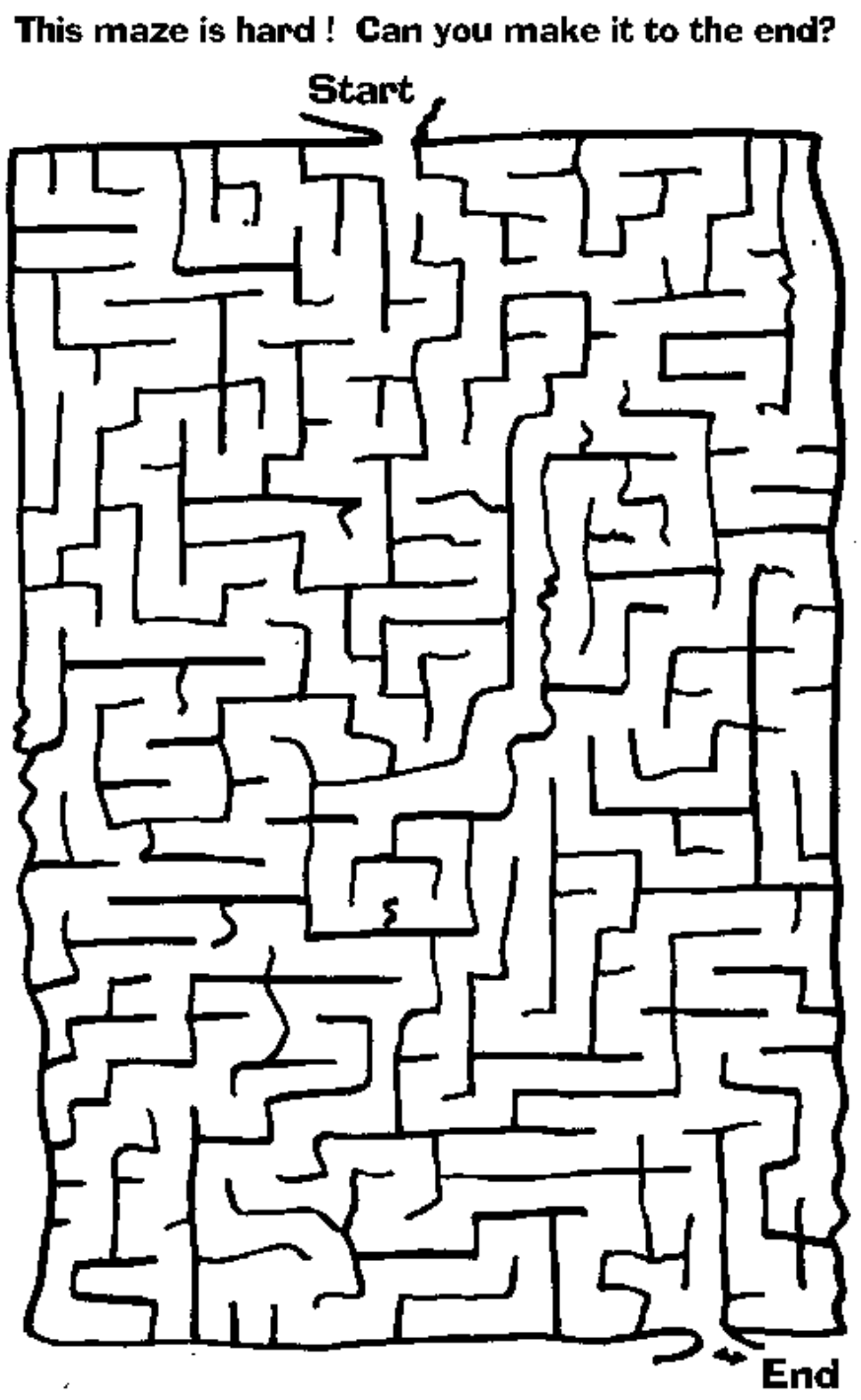
Arterial hypertension prevalence is common around the world and it is a major cause of cardiovascular morbidity and mortality. Timely diagnosis and adequate treatment are of essential importance and improve the life expectancy. A persistent systolic blood pressure (SBP) of 140-159 mmHg or diastolic (DBP) of 90-99 mmHg is classified as stage 1 hypertension and stage 2 for SBP ⩾ 160 or DBP ⩾100 mmHg. Prehypertension (120-139/ 80-89 mmHg) warrants lifestyle modification. Secondary causes of hypertension, such as renal artery stenosis, Cushing syndrome and pheochromocytoma are prevalent in 5-10% of the patients and should be excluded. Thiazide diuretics are recommended as initial therapy for uncomplicated hypertension, either alone or in combination with other agents. The basic BP target for hypertensive patients is <140/ <90 mmHg and <130 / <80 mmHg for patients with diabetes and/ or renal disease as co-morbidity. Frequently, despite treatment, the BP is suboptimally controlled and exploration of alternative treatment modalities remains essential. Evidence suggests that hyper-activation of the sympathetic nervous system (SNS) plays a major role in initiating and maintaining hypertension. Hypertensive patients have higher levels of catecholamines and associated increased renal, cardiac and skeletal muscle SNS activity. In the BP regulating system, the kidneys play a crucial role through efferent and afferent neural pathways. Efferent renal SNS regulate the BP directly via the kidney through promoting tubular salt and water retention and indirectly through the renin-angiotensin system mediating vasoconstriction and sodium and water retention. Afferent renal nerve traffic affects the central sympathetic nervous activity. To reduce renal sympathetic afferent and efferent activity, a percutaneous, catheter-based approach directly targeting the renal sympathetic nerves by applying endovascular radiofrequency energy in the renal arteries has been developed. This therapy has been studied in a series of studies and further studies are ongoing. In the Symplicity HTN-2 study, 106 patients with resistant hypertension, defined as SBP ⩾160 mmHg (or ⩾ 150 mmHg in patients with type 2 diabetes) despite the use of ⩾ 3 antihypertensive medications, were randomly assigned to undergo renal denervation with the Symplicity device or to continue treatment with antihypertensive medications alone. At 6 mo follow-up, in the denervation group, office BP had significantly decreased by a mean of –32/ –12 mmHg versus baseline, while there was no change (mean 1/ 0 mmHg) in the control group. A decrease in systolic BP of ⩾ 10 mmHg was observed in 84% of the patients who underwent renal denervation. Only a few procedural side effects were reported and no adverse effects on renal function during extended follow-up. Renal denervation extends the treatment options for patients with treatment resistant hypertension.

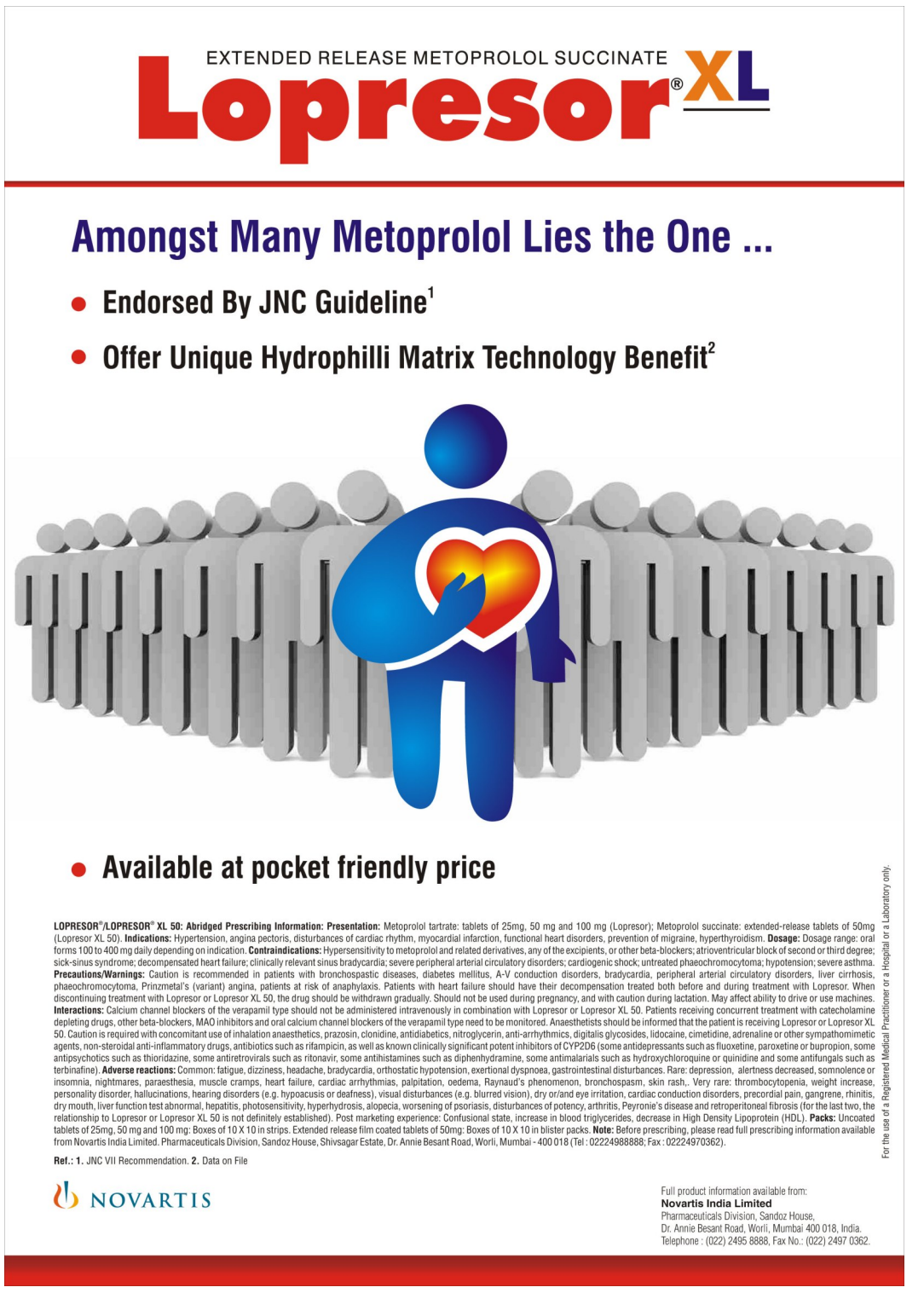
Newer Antiplatelet agents in ACS "Where, Which, Why & How"?

Keyur Parikh

Activation and aggregation of platelets play a key role in thrombus formation in the heart and arterial system. Antiplatelet drugs are therefore important for the prevention and treatment of intracardiac and arterial thrombosis and their consequences. Various clinical studies are conducted before new antiplatelet agents come in practice. The concept of clinical data aggregation for new antiplatelet agents is based on clinical evidence, guidelines, performance indicators, measurement and feedback, and quality improvement initiatives. There are four main classes of antiplatelet drugs. Acetylsalicylic acid (ASA), better known as aspirin, is the most widely used antiplatelet therapy. ASA acts by inhibiting the synthesis of thromboxane A2. ADP-receptor antagonists/P2Y12 receptor antagonists (clopidogrel and ticlopidine); prasugrel, cangrelor (IV) and AZD6140 are in phase III clinical development. Dipyridamole is the third class of antiplatelet drugs which increases levels of the second messengers cAMP and cGMP within platelets. Glycoprotein IIb/IIIa antagonists inhibit the binding of fibrinogen to its receptor by inhibiting platelet aggregation.

Clopidogrel is an excellent, well studied drug with long and extensive clinical experience in ACS/PCI patients. Prasugrel is a newer thienopyridine which irreversibly binds to P2Y12. It is more rapid in onset of action with stronger inhibitory effect than clopidogrel and lower variability in platelet response. Ticagrelor is a new class of P2Y12 inhibitor. It is a direct-acting (not a prodrug) Cyclo-Pentyl-Triazolo-Pyrimidine (CPTP). Ticagrelor is superior to Clopidogrel for several outcomes including death, MI, and stent thrombosis in patients presenting with ACS. Cangrelor is an intravenous P2Y12 Inhibitor with 3-5 minutes plasma half-life. It is a direct and Reversible P2Y12 inhibitor and more potent than clopidogrel. (90% inhibition of platelet aggregation at 1 - 4 mcg/kg/min IV). Elinogrel is a P2Y12 antagonist with no CYP effect. It is a first agent in this class in both IV and oral formulations. It is advantageous when used acutely in the cath lab. E 5555 are orally active antagonists of protease-activated receptor 1 (PAR 1) with potential antithrombotic and anti-inflammatory benefits. Based on various clinical studies, prasugrel and ticagrelor are superior to clopidogrel; rivaroxaban is promosing, and apixaban leads to excess bleeding with less benefits. A platelet thrombin receptor (PAR-1) antagonist including Atopaxar, is encouraging with some additional bleeding. To put into nutshell, most of the effect of antiplatelet therapy is on MI reduction besides mortality reductions are also possible. (Based on COMMIT; PLATO study data). Balance of efficacy and safety is challenging, especially with combinations of antithrombotics.





Pulmonary Embolism – Prevention and Treatment

Satya Gupta

Despite many medical advances, acute pulmonary embolism (PE) remains a cardiovascular emergency with high morbidity and mortality. With clinically suspected PE, rapid and targeted treatment is essential because speedy diagnosis and immediate therapy can lower the morbidity and mortality associated with PE. However, the non-specific clinical presentation and the variety of suggested diagnostic algorithms, some of which are complex, can impede speedy and certain diagnosis. A pulmonary artery embolism is defined as a partial or complete occlusion of a pulmonary arterial branch. Approximately 70% of cases are caused by pelvic or leg thromboses. Awareness of the risk factors is essential if individualized and risk-adapted prophylaxis is to be implemented. In clinical practice, however, PE also occurs in about 20% of cases in patients without recognizable risk factors.

With acute PE, there is a mechanical obstruction of the pulmonary circulation system. The hemodynamic consequences are determined by the size of the embolism, any pre-existing cardiopulmonary diseases, and the intensity of pulmonary vasoconstriction. With hemodynamically significant PE, the sudden increase in pulmonary arterial pressure can cause acute right ventricular dysfunction and lead to the interventricular septum deviating to the left with a fall in the left ventricular preload. There is a danger of a subsequent reduction in coronary perfusion and cardiac output with cardiogenic shock and myocardial ischemia. Suspicion of acute PE is raised by symptoms such as sudden onset dyspnea and tachypnea, chest pain, hemoptysis or syncope but these symptoms are neither sensitive nor specific due to the variety of possible differential diagnoses. Additional examinations such as chest x-rays, ECG or blood gas analysis are also unsuitable to confirm or exclude suspected PE with sufficient certainty but they do help with differential diagnosis.

Apart from hemodynamic stabilization and reversal of hypoxemia, the therapeutic goals for acute PE are—depending on the severity—prevention of appositional thrombus growth, restoration of pulmonary blood flow, and prevention of recurrences. If there is no contraindication, parental anticoagulation is therefore obligatory. The options available include unfractionated heparin (UFH), low-molecular-weight heparin (LMWH). Where suspicion of an acute PE is high (high or intermediate clinical probability), initial anticoagulation—with consideration of the bleeding risk—must be initiated before a definitive diagnosis is available. Hemodynamically unstable patients with confirmed PE require immediate thrombolysis to relieve the right ventricle. The following active substances and dosage regimens are recommended.

Streptokinase*	250,000 U as a loading dose over 30 min, followed by 100,000 U per hour over 12–24 h
	Accelerated regimen: 1.5 million IU over 2 h†
Urokinase*‡	4,400 U per kilogramme of body weight as a loading dose over 10 min, followed by 4,400 U/kg/h over 12–24 h
	Accelerated regimen: 3 million U over 2 h†
Alteplase*	100 mg over 2 h§
	Accelerated regimen: 0.6 mg/kg over 15 min
Reteplase*¶	Two bolus injections of 10 U 30 min apart
Tenecteplase∫	30 to 50 mg bolus over 5–10 sec adjusted for body weight:
	<60 kg: 30 mg ≥60 to <70 kg: 35 mg ≥70 to <80 kg: 40 mg ≥80 to <90 kg: 45 mg ≥90 kg: 50 mg

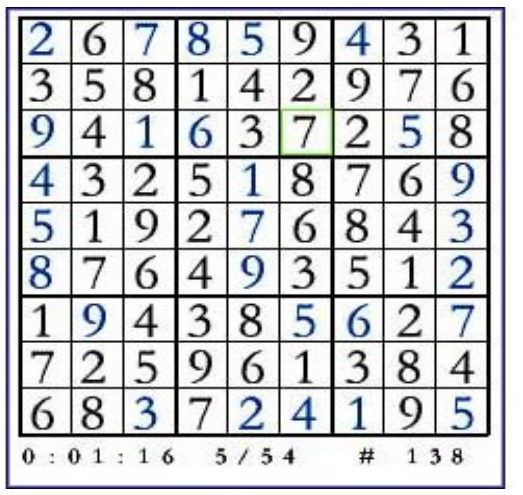
Invasive treatment (percutaneous and surgical intervention) are usually reserved for the patients with failure to respond with medical treatment and could be life saving in patients with massive pulmonary embolism. Prevention is, however, the best treatment.

MI in Pregnancy- A Different Entity

Uri Elkayam

Pregnancy associated AMI is different than AMI in non-pregnant patients in several important aspects that need to be taken in to account in the management of women with this condition. Atherosclerotic CAD, the most common cause of AMI in the non-pregnant population is responsible for only a 1/3 of cases with PAMI while the majority of cases develop their AMI by other mechanisms. The location of AMI in pregnancy is commonly the anterior wall and is therefore associated with a high incidence of LV dysfunction, congestive heart failure, cardiogenic shock and mortality. Because many of women with PAMI have CD or normal coronary anatomy the risk of thrombolytic therapy may outweigh the benefit and blinded use of such therapy is not advisable. High incidence of iatrogenic coronary dissection secondary to intracoronary contrast injection and mechanical interventions suggest that invasive approach to PAMI should be limited to high-risk patients. In such patients mechanical manipulations should be limited to a minimum. The use of guidelines recommended anti platelet therapy seems indicted for maternal protection, at the same time however women should be informed on the paucity of information available on the safety of these drugs for their foetus.

Answers Of Sudoku



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8	7	6	4	9	3	5	1	2
1	9	4	3	8	5	6	2	7
7	2	5	9	6	1	3	8	4
6	8	3	7	2	4	1	9	5

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Answers Of Cross Words

Across Answers

1. CATHARTIC
5. CAFFEINE
10. PHARMACODYNAMIC
12. SUBLINGUAL
13. EMETIC
14. GENERIC

Down Answers

2. TOXICITY
3. SYRINGE
4. IATROGENIC
6. ANTICOAGULANT
7. PHAMACIST
8. TRANQUILIZER
9. BACTERICIDAL
11. ANALGESIC

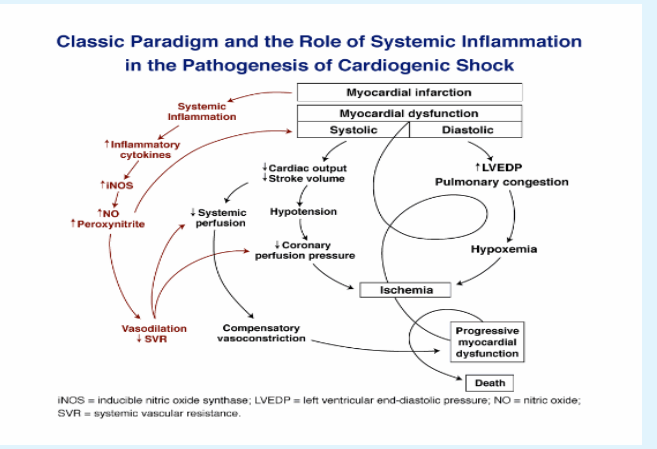
Cardiogenic Shock

Keyur Parikh

Cardiogenic Shock (CS) is a clinical syndrome manifested by a sudden reduction in myocardial contractility and cardiac output, leading to systemic hypotension and end-organ hypoperfusion. The incidence of CS is common as a consequence of predominant LV infarction (80%) and RV infarction (3-5%). CS develops with pertubations of left ventricular diastolic and systolic function resulting in reduced tissue perfusion. Main causes of CS are acute myocardial regurgitation, right ventricle infarction, left ventricular failure, cardiac rupture, ventricular septal rupture, primary valvular disorders and primary myocardial disorders. Clinical features of CS are shock with systolic BP<90, myocardial re-infarction, recurrent ischemia, mechanical complications and infarct expansion.

CS can be diagnosed by decreased cardiac output and evidence of tissue hypoperfusion in presence of marked and persistent (> 30 min) hypotension with a systolic BP < 90 mmHg; reduction in the cardiac index (<2.2 L/min/M2), and normal or elevated PCWP (> 15 mmHg). Right heart catheterization is a diagnostic method which checks elevated LV diastolic filling pressure (pulmonary capillary occlusion pressure), diminished cardiac output and index, elevated systemic vascular resistance, pulmonary congestion and high levels of nitric oxide (NO).

Pulmonary artery catheterization findings provide clues to mechanical complications of MI that lead to CS and are useful in patients who remain hypotensive



despite fluid challenge, or in those hypotensive in whom fluid administration is contraindicated.

Echocardiography is useful in determining the degree of LV dysfunction, evaluation of suspected mechanical complications of AMI causing CS, rupture of the papillary muscle of the mitral valve and rupture of the interventricular septum. It also confirms or excludes the presence of fluid in the pericardial space if ventricular free wall rupture is suspected. LVEF and the severity of mitral insufficiency are predictors of 1-year survival in patients with moderate to severe mitral insufficiency.

Administration of antiplatelet and antithrombotic agents and vasopressors including dopamine and norepinephrine is main pharmacological therapy for CS patients. Prompt endotracheal intubation and mechanical ventilation and infusion of sodium bicarbonate is main supportive treatment for CS patients. Mechanical circulatory support is given to CS patients by use of intra-aortic balloon pump (IABP) counterpulsation, which augments central aortic pressure in diastole, increases coronary perfusion and reduces afterload and decreases myocardial oxygen demand. Based on clinical trial findings, IABP support reduces afterload, increases myocardial oxygen supply and augments diastolic perfusion pressure. It is associated with a decrease in CS patient mortality and is easy to use with fewer complications. However, IABP support does not reduce 30-day mortality; CS patients complicating myocardial infarction undergoing early revascularization.

Other ways to provide mechanical circulatory support include newer ventricular assist devices (VADs), percutaneous VAD (pVAD) and an alternative pVAD - IMPELLA device. LVAD unloads LV pressure and volume with enhanced remodeling capability and decreases wall tension with improved endocardial blood flow. TandemHeart pVAD system is useful in reducing myocardial oxygen demand. Impella device is excellent in preventing shock. Access site and ischemic limb complications with less improved outcomes are more common with use of these devices than with IABP.

Based on ACC/AHA recommendations PCI is recommended for patients with acute MI who develop cardiogenic shock with other suitable conditions. A hemodynamic support device is recommended for patients with cardiogenic shock after STEMI who do not quickly stabilize with pharmacological therapy.

Varicose Veins : Diagnosis and Management

Srujal Shah

Introduction: Recent innovations have revolutionized the management of varicose veins and chronic venous disorders (CVD). Despite widespread awareness programmes, thousands of patients are suffering from chronic venous ulcers and leg pains due to lack of basic referral system and guidance.

Methods: From 1st March, 2012 to 30th November, 2012, 300 patients with varicose veins, with female preponderance and mean age of 50 were evaluated at CIMS vascular unit. After initial clinical assessment they were classified according to basic 'CEAP' classification and evaluated with venous Doppler scan. 60 patients out of 300(20%) having clinical severity stage 2 symptomatic to stage 6 underwent treatment. Our protocol included RF ablation (Using VNUS closure fast) for GSV and SSV varicosities with S-F and S-P Junction in competency respectively. Below knee veins were managed using USG guided Foam sclerotherapy and/or Hook phlebectomies. Procedures were performed under "Day care surgeries" or single day admissions. Out of 60, 15 patients had venous ulcers, 5 patients had BIL varicosities and 3 patients had SSV varicosities. Post procedure protocol is early ambulation and grade II compressions stocking for 6 weeks.

Results: All patients were followed up at 1, 3 and 9 months. 1st follow up included Doppler scan. Follow up ranges from 1 month to 9 month. All patients made satisfactory recovery except 2 patients who had small skin necrosis due to foam extravasation and 1 patient who needed second cycle of sclerotherapy for residual veins.

Conclusion: Patient tailored strategies for varicose veins and venous ulcers using combination of RF ablation, Foam sclerosants and ambulatory phlebectomies gives safe and durable results. The patients with grade II and VI gets maximum satisfaction and improvement in quality of life.

Don't Miss Tomorrow
Live Cases Session - Interactive

3:20 PM	**Case 1 :** Radial Percutaneous Transluminal Angioplasty with Stenting of Celiac Artery and Abdominal Aorta in Ventilated Patient with Takayasu Arteritis and Severe Heart Failure ***- Keyur Parikh***
3:35 PM	**Case 2 :** Late presentation, Missed diagnosis, Complications and ... ***- Milan Chag***
3:50 PM	**Case 3 :** Patient with Bilateral Carotid Artery Stenosis Presenting With Syncope ***- Urmil Shah***
4:05 PM	**Case 4 :** Complex Coronary Intervention ***- Hemang Baxi***
4:20 PM	**Case 5 :** PCI of Unprotected Left Main Coronary Artery in a Young Man with Angina ***- Anish Chandarana***
4:35 PM	**Case 6 :** Brady Dependent Tachy / A Bizarre Rhythm ***- Ajay Naik / Aditya Kapoor***
4:50 PM	**Case 7 :** Management of Acute Extensive Iliofemoral DVT with IVC Filter and Catheter Directed Thrombolytic ***- Satya Gupta/Srujal Shah***
5:05 PM	**Case 8 :** RVOT Device Closure in Management of Post Operative Chylothorax in Child with Complex CHD ***- Kashyap Sheth***
5:20 PM	**Case 9 :** Aortic Aneurysm and Dissecting Aortic Aneurysm ***- Dhiren Shah***
5:35 PM	**Case 10 :** Total Arterial Revascularization with Special Reference to Usage of LIMA and RIMA in CABG ***- Dhaval Naik***
5:50 PM	Discussion with Q & A

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