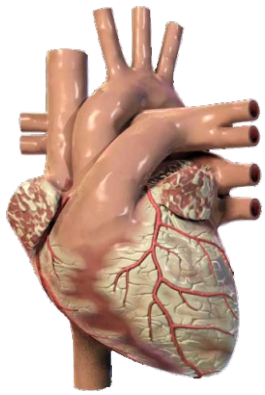
Healthy Heart

Volume-1 | Issue-11 | October 5, 2010

The Heart Care Clinic at CIMS



Price : Rs. 5/-

From the desk of editor:

Coronary artery bypass surgery (CABG) is the most commonly performed operation in the world today. Even though the operation is very much routine today, it still constitutes major surgery with significant mortality and morbidity. In this review, we try to cover the most common postoperative problems that can occur in this patient group after discharge, i.e what the physicians & general practitioner will be consulted with, even if initially.

- Dr. Dhiren Shah

4 Modular class 100 laminar air flow OT's fully functional at CIMS

Cardiac surgery and the general practitioner: A practical guide to postoperative problems

Just as in any other medical speciality, history and a well conducted directed examination are the key to accurate diagnosis post cardiac surgery.

Taking history of a patient post cardiac surgery - The 10 point history

1. What operation has the patient undergone?
2. When was the operation performed on the patient?
3. Was the operation an emergency?
4. How long was the total and postoperative hospital stay? (Usually 5 to 10 days)
5. Preoperatively, what was the cardiorespiratory state of the patient ?
6. How well was the patient on hospital discharge?
7. Was the patient specifically warned about any symptoms or signs?
8. What medications were the patient given upon discharge?
9. What is the specific complaint of the patient?
10. Any specific complaints about sweats, temperature, shortness of breath, cough, pain, weeping wounds and ankle swelling?

Examining a patient post cardiac surgery - The 10 point examination

1. Does the patient look well?
2. Is the patient short of breath?
3. Cold hands and feet indicate poor cardiac output.
4. Warm hands and a bounding pulse indicate sepsis.
5. Examine wounds-sternal, leg, arm, and neck
6. Is ankle oedema present?
7. Is jugular venous pressure (JVP) raised?
8. Listen to heart sinus, fast atrial fibrillation (AF), and murmurs. Don't rely on radial artery for heart rate.
9. Listen to lungs wheeze, infection, effusion, atelectasis
10. Is epigastrium tender? Gastritis

Auscultation of the heart post cardiac surgery

The heart sounds of patients who have had a CABG are commonly normal; however a 3rd heart sound may be heard with left ventricular failure. Mitral regurgitation may be heard secondary to anular dilation.

In patients with tissue valves, auscultation will rarely detect an abnormality. The presence of a flow murmur should prompt an echocardiogram to evaluate outflow tract obstruction, or valvular degeneration, which occurs 5-10 years postoperatively. The presence of a regurgitant murmur should always raise the suspicion of endocarditis in the appropriate clinical scenario or valvular dehiscence. Again echocardiography and possible cardiological evaluation should be undertaken. An apyrexial patient who is well with a normal CRP (C-reactive Protein), ESR (Erythrocyte Sedimentation Rate) and WBC is unlikely to have endocarditis.

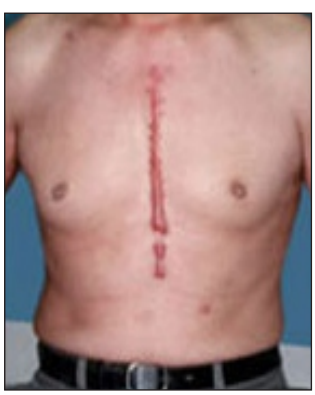
Arrhythmias

Any arrhythmia is possible after cardiac surgery; by far the most common cause is atrial fibrillation. The cause of this is multifactorial, and poorly understood. However, two important points need addressing. Firstly, that the patient doesn't have hypokalemia, and secondly that the patient is not hypoxic. In practical terms if the patient is eating and drinking normally, and they are not on potassium losing diuretics (eg frusemide alone), and they are not short of breath, and they have a clinically clear chest then these two causes can be eliminated.

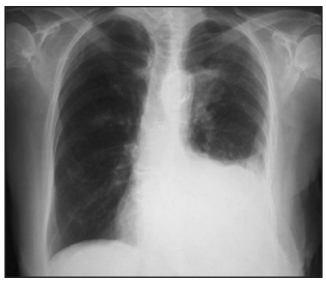
Opinion is divided between digoxin and amiodarone. In patients who were on beta blockers pre operatively that have been stopped post operatively some reintroduce the beta blockers, albeit at half the previous dose. Sotalol is the preferred beta blocker of choice in most cardiac surgical units.

Wound infections

Minor leg wound infections are relatively common (1-10 % of cases) with severe infections of the leg and sternum being relatively uncommon <1%. Excessive wound inflammation, in the absence of infection needs to be recognised to avoid unnecessary antibiotics. Staph aureus remains the most common organism involved, hence the usage of flucloxacillin, or erythromycin in penicillin allergy patients. It is important to ensure that no puss is situated deep in the wound. Any suspicion of deep seated pus needs drainage as antibiotics are unsuccessful in this situation. In assessing sternal wounds sternal stability needs to be assessed. Any evidence of instability may herald mediastinitis and is a reason for referral back to the cardiac surgical unit.



Pleural effusions



Pleural effusions, are very common post cardiac surgery, especially left sided, secondary to opening the left pleura when harvesting the left internal mammary artery (LIMA). Small effusions should be left to self resolve, larger ones should be either aspirated or have a chest drain inserted. The decision to drain an effusion depends on the respiratory state of the patient; the more short of breath the lower the threshold to intervene.

Respiratory infections

Respiratory infections are frequent postoperatively, especially left sided. In patients who have prolonged hospital stays, pseudomonal infections become more common. Sputum cultures can be very helpful in treating failed courses of antibiotic therapy. Signs of systemic unwell should prompt referral back to hospital for intravenous antibiotic therapy and/or oxygen therapy.

Short-of-breath patient

Shortness of breath post cardiac surgery is a common presentation to GPs. The cause can be broken down into haematological, respiratory and cardiac. It should not be forgotten that CABG does not improve dyspnoea, and therefore a comparison with preoperative status is needed.

Anaemia is common postoperatively, and care should be taken to diagnose the patient who has developed gastrointestinal haemorrhage secondary to the aspirin they are on.

Respiratory causes of shortness of breath that are common postoperatively include pre-existing COPD

(Chronic Obstructive Pulmonary Disease), chest infection, pleural effusions, and basal atelectasis in the first 10 days postoperatively. Obviously, clinical examination will help in elucidating the cause; however, a CXR (Chest X-ray) can be invaluable. The left base is the most common site of respiratory complications.

Left ventricular failure, is the most common cause of cardiac induced shortness of breath, as valvular pathology is most likely to have been corrected. ACE inhibition and diuretics remain the main stay of therapy here. Prosthetic valvular dysfunction should always be suspected, although this is rare. Occasionally, fast atrial fibrillation will present as breathlessness, with the patient having no sensation of tachycardia.

Medications-post cardiac surgery

This remains one of the most confusing areas for GPs post cardiac surgery, unfortunately, usually due to poor communication from the cardiac surgical unit.

(a) Maintaining graft pateency

Aspirin is given to all patients who undergo CABG, unless they are aspirin intolerant, in which case, clopidogrel, or warfarin are utilised. Warfarin is frequently given to patients who have undergone endarterectomies, or who are in atrial fibrillation. The risk benefit of the combination should be evaluated by the surgeon who undertook the CABG. Increasingly, aspirin is being co-prescribed with clopidogrel, due to the perceived reduction in cardiovascular events that will result in reduced cardiac morbidity & mortality. Antacids, either H2 blockers or proton pump inhibitors are given occasionally as gastric prophylaxis.

(b) Statin therapy

All patients who were on a preoperative statin, or who are hyperlipidemic should go back on a statin postoperatively, possibly life long. Statin therapy need not be withdrawn preoperatively as the perceived risk of rhabdomyolysis seems to have been overestimated. Common side effects of statin therapy include nausea and abnormal liver function tests.

(c) Warfarin

Warfarin is always administered to patients with mechanical heart valves, and sometimes to patients who have tissue valves, atrial fibrillation, or have undergone endarterectomies. In patients who have tissue valves, atrial fibrillation, or have undergone endarterectomies an INR (International Normalised Ratio) above 2.0, (preferably above 2.5) is necessary. With respect to mechanical valves, the surgeon will recommend a range for the INR to be in. However, mechanical valves in the aortic position should not have an INR below 2.0, and in rhe mitral position the INR should be above 2.5.

(d) Antianginal medications

These are all stopped postoperatively. Some surgeons utilise a nitrate for a short period postoperatively. Calcium channel blockers, usually diltiazem or amlodepine are frequently given postoperatively to counter radial artery spasm, and not for its anti-anginal effects.

(e) Anti-hypertensive medications

It is common for patient's blood pressure to be low for the first few weeks postoperatively; hence the stoppage of preoperative anti-hypertensives upon hospital discharge. These invariably will need to be reintroduced at some point postoperatively. ACE inhibitors are becoming first line therapy, especially in patients with poor left ventricular function.

(f) Diuretic therapy

Diuretic therapy is commonly given to patients post cardiac surgery. Preoperative diuretic therapy usually predicts the need for long term use. However in patients with post valve surgery, the dose can be reduced. Patients who undergo CABG are frequently put on frusemide. This is usually in patients with poor left ventricular function or those who have been on cardiopulmonary bypass – as opposed to being done off pump. The majority of patients who were not on preoperative diuretics can have them stopped at 6 weeks postoperatively (usually in their outpatients appointment).

Radial artery

The use of the radial artery, has recently become more common secondary to the perceived benefit of arterial

revascularisation. Wound infections of the non dominant forearm are uncommon, however sensory changes in the forearm and hand are relatively common. Forearm claudication is unusual. Patients are usually treated with three months of calcium channel blockers-usually diltiazem or amlodipine.

Methods of skin closure

Skin is usually closed with an absorbable sutures, meaning no sutures need to be removed. A few surgeons utilise clips. The removal of the clips requires the dedicated clip remover to reduce any discomfort felt by the patient.

Neuropsychological dysfunction and fine movements

The use of cardiopulmonary bypass (heart lung machine) is known to affect all aspects of cerebral and cerebellar function. This usually manifests itself as loss of concentration, reduced mental agility, memory impairment, and uncoordinated fine movements of the hands. Symptoms usually recover over the ensuing months, however recovery may be incomplete. With the introduction of off pump CABG, with no touch of the aorta, these complications may be dramatically reduced in future.

Pericarditis

Pericarditis post cardiac surgery, is well described but infrequent. Severe cases resulting in Dresslers syndrome (pleural effusions and pericarditis) may require steroid treatment, however usually a short course of a non steroidal is sufficient.

(Localised pericarditis is a common term what probably implies a myocardial infarction, which should always be ruled out before a diagnosis of pericarditis is made).

LIMA numbness

Because of LIMA harvesting, there is nerve injury on chest wall, which can result in numbness of area and or hypersensitivity of variable size over the left anterior hemithorax. Sensation may not become normal in a few patients and they should be merely reassured.

Ulnar nerve/ T1 palsy

Spreading the chest via a median sternotomy can result in traction injuries to the brachial plexus. This manifests itself in the form of ulnar nerve / T1 neurology. which is usually the tingling/numbness along the medial border of the hand, which usually recovers spontaneously.

Recurrent angina

Recurrent angina occurs in 1-5 % of patients in the 1st year and up to 30 % of patients by 10 years. Patients should be reinvestigated in a standard manner, usually by a cardiologist.

Driving, flying and foreign holidays

These should all be avoided for at least 8 weeks assuming a smooth postoperative course. This allows the sternum to heal and the neuropsychological sequelae to improve. Medical insurance should be recommended for all foreign travel.

Quiz of the Month

1) *Which base is the most common site of respiratory complications?*
   a) Right base b) Left base
   c) Middle Base d) None of the above
2) *Which therapy in patients is commonly given after post cardiac surgery?*
   a) Statin therapy b) Gene therapy
   c) Diuretic therapy d) Insulin therapy
3) *What is the most common cause of arrhythmia possible after cardiac surgery ?*
   a) Atrial fibrillation
   b) Brady cardiac
   c) Supraventricular tachycardiac
   d) Ventricular Fibrillation
4) *What should be ideal INR of warfarin in mechanical valves in the aortic position ?*
   a) Above 2.5 b) 2 - 2.5
   c) Below 2.0 d) 1.5
5) Which name syndrome occurs after post open heart surgery
   a) Dresslers syndrome b) Noonas syndrome
   c) Cushing syndrome d) Heart failure syndrome

Feed Back Form

Please send your feedback and answers to the Quiz for this issue and drop it in the post box:

Name: _____

Degree _____ Name of clinic/hospital: _____

Address: _____

City: _____ State: _____ Pin : _____

Phone (O) _____ (M) _____ Email: _____

- Did you like this issue? Yes ☐ No ☐
- Did you like the Topic of the issue? Yes ☐ No ☐
- Do you think this issue updated your academic knowledge? Yes ☐ No ☐

- Put a cross ⊗ inside the correct answer
- Only one best answer for each question
- Three correct entries on first-cum-first basis will get prizes with their name, address and photo published in next issue
- Everybody who send replies to all the 5 questions will get a Certificate of CME of One Hour (1 Hour) from CIMS-3C-CON
- Please send your answers by post to our office address.

Answer Sheet of the Quiz of Healthy Heart Volume-1 Issue-11 (October 5, 2010)

Question No.	A	B	C	D
Question-1	○	○	○	○
Question-2	○	○	○	○
Question-3	○	○	○	○
Question-4	○	○	○	○
Question-5	○	○	○	○

CIMS Care Institute of Medical Sciences

CIMS Hospital, Nr. Shukan Mall, Off Science City Road, Sola, Ahmedabad-380060.
Phone : +91-79-2771 2771-75 (5 lines)
M : +91-98250 66664, 98250 66668

Endovascular Workshop on September 10, 2010

Dr. Ashit Jain, (Interventional Cardiologist, USA) was at CIMS and performed stenting on 6 patients with blocks in the brain, leg and carotid artery who benefitted from this workshop.

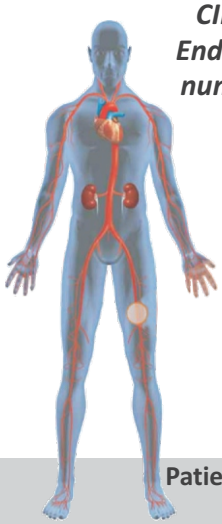
"CIMS has turned out to be one of the finest medical facilities in the country. It is a 'complete' medical experience, where patient experiences not only the best medical care from the finest doctors, but in a superb facility, full of people who care for all human needs. I am glad and proud to be a part of such a medical facility. I hope we can continue to keep this high standards forever."

- Dr. Ashit Jain

"I was admitted to CIMS in a Suite with best possible facilities, where the staff was fully prepared to receive me. On 10th Morning I was once again taken to the Cathlab. It was a pleasure to undergo Angioplasty with the finest team of Doctors led by Dr. Ashit Jain and Keyurbhai.I was amazed with the expertise by which stenting was done on my left femoral artery with excellent result. The total culture of Hospital is grand. I felt comfortable to walk without pain and was discharged with greetings from each and everyone. I left CIMS on 11.09.2010 with fresh energy. I convey my heartiest sentiments about the wonderful facilities and expertise at CIMS."

- Dr. K. C. Chaudhary

PVD Workshop February 3, 2011



CIMS Team has done over hundreds of Endovascular cases including a very large number of carotid interventions over the last few years.

Patients who are at High Risk are:

- Older Age
- Family history of heart or vascular disease
- Past or current smokers
- High cholesterol levels
- H/O Recurrent TIA (Eg.: Temporary blindness/Paralysis), CV Stroke
- H/O, HT, DM, IHD
- H/O Smoking or Tobacco use

Patients will be provided following FREE services:

1. Consultation 2. ABI

Daily screening camp of the concerned patients will be held in the month of January, 2011 at CIMS. Time : 12.00 noon- 5.00 pm

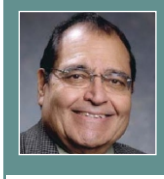
Please contact us for further details:

Mr. Ketan Acharya: 09825108257, Mr. Dilip Chauhan: 09825376321

Organized by CIMS Care Institute of Medical Sciences

CIMS Hospital, Nr. Shukan Mall, Off Science City Road, Sola, Ahmedabad-380060,Ph. : +91-79-2771 2771-75 (5 lines)
Mobile : +91-98250 66664, 98250 66668

An informative and excellent academic program at CIMS



November 28, 2010

Dr. Navin Nanda
The world's pioneer of echocardiography at CIMS

Schedule for CME

7.30 am Registration with Breakfast at CIMS

8.30 am Application of Newer modalities in Echocardiography with live Demonstration by the Master :

- 3D Echo
- Contrast Echo
- Tissue Doppler
- Strain rate

1.00 pm Lunch

If interested, it is mandatory to register for CME with
Mr. Ketan Acharya (M) +91-98251 08257
Mr. Mahendra Desai (M) +91-90990 66527
(limited registrations)

Organized by CIMS Care Institute of Medical Sciences

CIMS Hospital, Nr. Shukan Mall,
Off Science City Road, Sola,
Ahmedabad-380060
Phone : +91-79-2771 2771-75 (5 lines)
Mobile : +91-98250 66664, 98250 66668

CIMS-3C-CON 2011

Education For Innovation

in collaboration with

4th World Congress International Academy of Cardiovascular Sciences

February 4-6, 2011
Tagore Hall, Ahmedabad, INDIA

Heart Health week in Gujarat

February 1-3, 2011
The Maharaja Sayajirao University of Baroda, Vadodara, INDIA

Organized by

CIMS Care Institute of Medical Sciences

The Heart Care Clinic Clinical Care Consultants

(IACS) International Academy of Cardiovascular Sciences

(ISHR) International Society for Heart Research

The Maharaja Sayajirao University of Baroda

Pre-final program ready

Over 175 lectures

Over 100 International and National faculty

Visit www.cimscon.com for further details

Day-3 (February 06, 2011 - Sunday)
Full Day Certification Courses - Rs. 1000 only

- **Internal Medicine**
- **Critical Care**
- **Neonatal and Pediatric Cardiology and Critical Care**
- **Clinical Cardiology, Echo Cardiography & ECG Workshop**
- **Management & Financial Leadership in Health**

CIMS-3C-CON 2011 Registration Form

- ☐ **Rs. 2500/- for CIMS-3C-CON 2011 Clinical Main Conference**
- ☐ **Rs. 1000/- for Certification Course***
  - ☐ **Internal Medicine**
  - ☐ **Critical Care**
  - ☐ **Neonatal and Pediatric Cardiology and Critical Care**
  - ☐ **Clinical Cardiology, Echo Cardiography & ECG Workshop**
  - ☐ **Management & Financial Leadership in Health**

☐ Prof. ☐ Dr. ☐ Mr. ☐ Mrs. ☐ Ms.

Full Name _____

Qualification : _____

Resi. Address : _____

City : _____ State :_____ Pin Code : _____

Ph. (STD Code) (O) _____ (R) _____ (M) _____

Email : _____

Payment Details :

(***Please note behind the cheque the chosen certification course)***

Rs. _____ in word : _____

DD/Cheque No._____ Bank _____ Dated _____

**If you want hotel accommodation? ☐ Yes ☐ No

(The accommodation package is priced at INR 3,000/- for 2 nights with twin sharing & INR 4500/- for 3 nights)

_____
Signature

Cheque or DD's to be made A/C payee and in the name of **'CIMS Hospital Pvt. Ltd.'**
Kindly mail the registration form along with the cheque/DD to our office.
All Cash Payment are to be made at 'CIMS Hospital, Ahmedabad' only.

* Choose any one certification course
** Hotel Accommodation is optional. If you have applied for accommodation, please send a separate deposit cheque of INR 3000 to cover the cost of your stay for two nights (Additional INR 1500/- night). Students also need to pay for Hotel Accommodation at the same rate.

Due to limited seating in various venues, register early to avoid disappointment.

CIMS Care Institute of Medical Sciences

CIMS Hospital, Nr. Shukan Mall, Off Science City Road, Sola, Ahmedabad-380060. Ph. : +91-79-2771 2771-75 (5 lines)
Mobile : +91-98250 66664, +91-98250 66668

Healthy Heart Registered under RNI No. GUJENG/2008/28043
Permitted to post at MBC, Navrangpura, Ahmedabad-380009 on the 12th of every month under Postal Registration No. GAMC-1725/2009-2011 issued by SSP Ahmedabad valid upto 31st December, 2011
Licence to Post Without Prepayment No. CPMG/GJ/97/2010-2011 valid upto 31st December, 2011

If undelivered Please Return to :

CIMS Hospital, Nr. Shukan Mall,

Off Science City Road, Sola, Ahmedabad-380060.

Ph. : +91-79-2771 2771-75 (5 lines)

Fax: +91-79-2771 2770

Mobile : +91-98250 66664, 98250 66668

Printed, Published and Edited by Dr. Keyur Parikh on behalf of the CIMS Hospital
Printed at Hari Om Printery, 15/1, Nagori Estate, Opp. E.S.I. Dispensary, Dudheshwar Road, Ahmedabad-380004.
Published from CIMS Hospital, Nr. Shukan Mall, Off Science City Road, Sola, Ahmedabad-380060.