Cardiothoracic Care Centre

Information for patients

Contents

Part A

Introduction

General information about cardiac surgery and associated postoperative considerations

The Cardiothoracic Care Centre at St Vincent's is designed to manage a wide range of cardiac and thoracic procedures, both surgical and medical. The hospital has excellent diagnostic equipment and specialised surgical equipment available for the management of cardiac and thoracic surgical procedures.

The purpose of open heart surgery is to improve the quality of your life. This cannot be achieved by surgery alone and needs a positive attitude and input by you in order to achieve a beneficial change in lifestyle both pre and post surgery.

Changes such as stopping smoking, losing weight and reducing your cholesterol level if needed take time, motivation and willpower. You should avoid excessive alcohol intake, as the sudden deprivation may make the post-operative period more difficult.

However, it is very important to modify these and other risk factors if your operation is going to enable you to get the best out of your life.

Prior to any operation on the heart or major arteries, knowledge of the anatomy and function of these structures is essential. This is achieved through a combination of internal heart investigations and angiographic studies (special x-rays) involving insertion of a catheter or tube into the heart, together with non-invasive investigations such as echocardiograms.

Once surgery has been decided and discussed with you, arrangements will be made for your admission to hospital.

As part of this process a pre-admission clinic is run twice a week in the Cardiothoracic Care Centre. You will be advised of the date and time for you to attend this clinic.

In the clinic you will have x-rays and other investigations, as required. Some of these investigations include a blood examination – blood count, blood group, antibody levels and testing for previous exposure to hepatitis. Swabs are also taken looking for abnormal bacteria on skin surfaces.

With patients undergoing valvular surgery we must ensure that you have had a recent dental examination.

The aim of the pre-admission clinic is to ensure that you are fully prepared for your operation. At the clinic you will be seen by several members of the healthcare team. They will be able to discuss with you details of your expected surgery and hospital stay.

During your stay in hospital you will be nursed in the Cardiothoracic Care Centre. You will go to theatre, after which you will go to the Intensive Care Unit for the first 24 hours. You will then be transferred back to the Cardiothoracic Care Centre the day after surgery. All the staff will be working towards your recovery and will be anxious to hear from you regarding any difficulties you are experiencing at any time.

Your estimated length of stay in hospital will be 5-6 days following the operation. On discharge from hospital, it is advisable that you have someone at home to lend support if you need it.

Please see the *Process of Care* booklet which will provide you with details on your hospital stay.

Anaesthesia

Prior to leaving the ward for the operating theatre, the nurse will give you a premedication injection and/or tablets as prescribed by your anaesthetist. This will help you feel relaxed on arrival in the operating suite.

Immediately before the operation the anaesthetist will insert a fine tube (catheter) into an artery in the wrist to monitor your blood pressure during and after the operation. A catheter is also inserted into a vein in the neck which is used for monitoring pressures in the heart during surgery and for giving fluids or drugs as required. These will be inserted under local anaesthetic.

Once the general anaesthetic is given, you will have a tube placed in the bladder to drain urine. The anaesthetist will place a plastic breathing tube via your mouth into your windpipe to control your breathing during the operation.

During the operation, your anaesthetist constantly manages your heart's condition and your anaesthetic.

Bypass

For almost all operations on the heart, there is a need to have a still, empty heart, so the circulation must be supported artificially during this period. Normally, at the start of the operation, a large tube is placed into the right side of the heart to collect blood returning to the heart from the body. Instead of being passed to the lungs, this blood is diverted to the heart-lung machine.

This will do the work of both the heart and the lungs during the actual operation on the heart. Blood, rich in oxygen is returned to the body by a second large tube usually placed in the main artery (aorta).

Blood is also collected from inside the heart and around the operation field and returned to the machine to minimise any losses. During this period, a drug (Heparin) is given to prevent any clotting in the machine.

The heart is also protected by administering a special solution into its own circulation (cardioplegia). It will be

relaxed and de-activated temporarily by this solution. At the end of the operation, blood is restored to the heart and it will begin to gradually take over from the machine.

Finally, the effects of Heparin are reversed, the large tubes are removed and the surgical wounds are then repaired in the normal way.

Blood usage

Most of the simpler cardiac procedures can be undertaken with little or no requirement for blood transfusion. Occasionally, a patient will require a large transfusion under life-threatening situations.

Most patients will receive their own blood that is collected intra-operatively and returned to them in theatre. The blood that is lost post-operatively via the drain tubes is collected in a special system and returned to the circulation.

If you wish to donate your own blood pre-operatively, this should be discussed with your surgeon. It is not always appropriate to donate blood beforehand.

Blood donation

As you will probably be using blood donated by other people during your operation, you might like to encourage your relatives and friends to donate blood to the Red Cross Blood Bank. These donations will not be used for you, but would help others.

Cardiac surgical operations

The heart is approximately the size of your fist and lies behind the breastbone with the lungs on either side. The best and most common surgical approach to the heart is by dividing the breastbone. The bone is rewired at the end of the operation to restore its stability.

The two most common procedures are coronary artery bypass surgery and valve replacement.

Coronary artery bypass surgery
This is the most commonly performed major operation in the western world. When performed as an elective procedure, it has a very low risk.

The aorta, the largest blood vessel in the body, takes oxygenated blood to all tissues of the body. The first branches

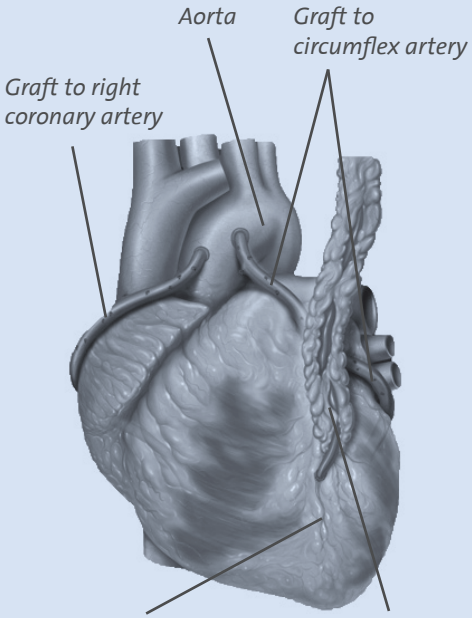
of the aorta are the right and left coronary arteries which supply blood to the heart muscle.

Narrowing or total blockage of a major coronary artery may result in angina, heart attack, rhythm irregularities, cardiac failure and in some instances, sudden death.

While some relief of symptoms can be obtained with medication, this will not cure the underlying narrowing of the coronary vessels. Coronary artery bypass surgery aims to restore the blood flow to the heart muscle by bypassing the narrowing (stenosis) of the coronary artery. This surgery is successful in about 90 per cent of patients who will be rendered pain free. The remaining 10 per cent of patients see improvements but are not totally cured of their symptoms.

In the surgical procedure, a long vein is removed from the leg. Removal of this vein may cause some swelling in the lower limbs and some patients have tingling or numbness on the side of the leg for a while.

Commonly, a large artery (the internal mammary artery) will be removed from



Types of heart grafts

behind the breastbone and also used as a graft. By using the internal mammary artery and segments of the long veins from the leg, it is possible to bypass one or more diseased coronary arteries by joining one end to the coronary artery below the obstruction and, in the case

of the vein grafts, joining the other end to the aorta. The mammary artery is already connected to the arterial system at one end.

If the coronary artery is found at operation to be diseased making joining of the vein to the coronary artery impossible, removal of the diseased lining or tissue (endarterectomy) is occasionally carried out.

Large numbers of coronary artery bypass procedures have now been performed and the technology has been refined so that the risk of complication for this procedure is now very low, and in most centres is under 1 per cent for elective operations.

Pacing wires
Occasionally after the operation the heartbeat may be very slow or irregular, so during the operation it may be necessary to attach small pacing wires to the heart. These are connected to a pacemaker to control the heart rhythm. They exit through two small incisions in the skin and stay in for 2-5 days. They are removed by a nurse on the ward between days 3 and 5.

Valve surgery
The mitral and aortic valves direct blood into and out of the left chamber of the heart, respectively. These valves may be narrowed or incompetent which results in backward flow of the blood. Most of these valves cannot be repaired and have to be replaced using an artificial valve.

Several types of valves are used. Most artificial valves require life-long use of anticoagulants. These agents slow the clotting of blood and thus prevent any abnormal clotting of blood around the valve. In some patients where blood thinning is contraindicated, biological materials or tissue valves are used. Hancock, Carpentier Edwards and lonescu Shiley valves are examples of this latter type.

After surgery

1. Chest pains
Every patient suffers from some discomfort from the chest. Pains may arise from the breastbone which may move very slightly despite being firmly secured at the time of operation, resulting in a clicking sensation. Healing of this bone can take 2 to 3 months.

2. Care of wounds
Skin healing is well advanced by the time you leave hospital.

(a) Chest wound
At home, no special treatment is required. Wash wounds with soap and water and pat them dry. Normally you will not need to have your wounds dressed.

If there is any oozing, throbbing or reddening of the wound, contact your doctor (or the hospital). In the first 12 months, if your wounds are exposed to the sun, ensure that you wear sunblock 30+ as they are very susceptible to sunburn.

(b) Drain tube wounds
These small wounds usually present no problem. Slight weeping may be managed with a gauze dressing and should not prevent showering or bathing.

(c) Leg wounds/arm wounds (coronary artery bypass grafts only)
Because a major vein/artery has been removed from the limb, swelling tends to occur for the first few weeks. When sitting we suggest elevating your legs onto a stool. A nerve runs with the vein and as the wound heals, numbness or tingling may occur for a while.

While in hospital, it is important that you wear well-fitting slippers or slip-ons for your protection.

3. Emotional changes
Most people who are going to have open heart surgery have had time to prepare themselves for their surgery. While you are in hospital however, there is a lot of stress on both you and your family. Your family not only have to experience the fear of a family member having major surgery, but they have to visit regularly and also manage the home.

You may experience a great deal of tiredness which can be underestimated by yourself and other family members.

After your surgery, you may experience mood changes and find that your concentration span is reduced. This can be frustrating, but it is a common occurrence following heart surgery and you can rest assured that it usually only lasts for about six weeks. If you find your mood changes are causing you concern, you may wish to consult your doctor for some professional advice.

Major surgery causes stress, high emotions, physical tiredness and sometimes loss of confidence. Mild depression is very common following discharge home and may occur quite unexpectedly. You may also have strange or disturbing dreams while in hospital and after discharge. These will pass.

It is a good idea to discuss your feelings with someone, as this can help to ease any anxiety you might be feeling. You will have your good days, but you will also have your bad days when you will have to take it easy. This is normal during your recovery. Find activities which are enjoyable and relaxing, such as reading, listening to music, gardening or walking – anything that gives you an emotional lift.

4. Decisions
Because of post-operative mood changes and the influence of medications, it is wise to avoid far-reaching decisions about changes in lifestyle such as retirement, change of job and so on, until convalescence is well advanced.

Often you will find that your thought processes are a bit muddled for a while. Your concentration span may be very short and your ability to do simple mental problems such as adding up columns of figures may also suffer. These problems pass gradually after a few months.

5. Visual changes
Blurred vision may occur while in hospital and is quite common. It should improve over a few weeks. Do not organise a new glasses prescription for at least two months.

6. Sex after open heart surgery
Sexual relationships after open heart surgery can take a little while to get back to normal.

It is important that you discuss your emotional and sexual needs with your partner, and re-establish your sexual relationship when you feel comfortable.

It is best not to leave it too long as anxiety can build up. Be relaxed and rested before sex. If you are tired or tense, wait until you feel better. People tend to worry about sex after having heart surgery, but in fact it is as safe as any other light exercise. Like any other activity, return to your normal

relationship with common sense and care.

Certain positions may be uncomfortable. Ensure that you are positioned so that you are comfortable. Avoid positions where your weight is resting on your arms, so that you don't place undue strain on your sternum (breast bone). Please do not feel embarrassed about seeking advice concerning sexual activity from anyone in the healthcare team.

7. Smoking
It is very strongly advised that smoking should be completely avoided after cardiac surgery. It is extremely harmful to the lungs, heart and blood vessels and will cause your grafts to block if you continue. Family members that smoke should be encouraged to do so outside or in an area away from you.

8. Palpitations
You will probably be a little more aware of your heartbeat than usual for the first week or two at home. Occasionally patients who have had artificial heart valves inserted may be aware of their action; this awareness quickly subsides and is never a great problem. If your heart rhythm on discharge from hospital is different from your normal (pre-operative) rhythm, you will be placed on medications. A plan for future management will be made with your doctor. If you develop frequent or persistent palpitations after you leave hospital, contact your doctor or the hospital.

9. Constipation
This is not unusual, especially if your are frequently taking pain relieving tablets. A high fibre diet and exercise will usually help, but a mild laxative may be necessary.

10. Sweats
Excessive perspiration may be experienced, especially at night. This is due to the effects of bypass on your body's temperature control centre. It can also be due to your pain medication. If this is severe or persists more than a week, contact your doctor.

11. Driving
It is recommended that you refrain from driving for at least six weeks. During this time your reactions are still slow and your chest will still be a little sore. You should discuss this

with your surgeon at your follow-up appointment. They will advise if you are well enough to drive. In some instances car insurance coverage during this time may also prevent patients from driving for six weeks after surgery.

12. Swimming
Swimming is not advisable during the first six weeks.

Medications

Pain relieving tablets
You will have been given analgesics when you are discharged from hospital and these should be taken whenever pain troubles you. It is wise to take them before you go to bed, particularly in the first week, reducing them as pain decreases.

Laxatives
As constipation is caused by some of the pain relieving drugs, some patients are given laxatives. Use them whenever necessary to maintain a regular bowel habit. It is important to avoid straining as this can cause pain in your chest incision. High fibre foods and fruit, especially figs, prunes and cereals are very helpful and healthy. Gradually increasing the amount of exercise will also help prevent constipation.

Anticoagulants
Patients who have had valve replacement surgery may be given Warfarin (a blood thinning medication or anticoagulant) to prevent unwanted clotting in the bloodstream.

When you are discharged from hospital the blood level of Warfarin may not be fully stabilised. Further adjustments will be required over the next month or two until your body's particular requirement is reached.

You will be advised to make an appointment with your doctor for a blood test within a few days of discharge. At that time you will receive further instructions regarding the dosage of anticoagulant tablets and future blood tests. If at any time prior to this appointment you experience any abnormal bruising or bleeding, contact your doctor (or the hospital) at once.

Many drugs and some foods interfere with anticoagulant therapy, so you should remember to:

1. avoid aspirin, either alone or in combination with other drugs

2. consult your doctor or pharmacist before taking ANY new tablets or medicines.

You will be given a small booklet (*Handbook for patients taking Anticoagulants*) to guide you in the safe use of your Warfarin; you should study this booklet carefully and carry it with you permanently.

Dietary guidelines

Population studies have shown there are certain factors that increase our chances of developing heart disease. These factors are often known as RISKS.

If you have RISK FACTORS associated with FOOD, including diabetes, hypertension, trouble with high cholesterol levels and weight, it is essential that you have proper dietary advice and stick to it. Reducing these risk factors is vital for reducing the risk of future cardiac events.

Your cardiologist, local doctor and dietitian can help you. It is the role of the dietitian to provide you with information and encourage you to develop the skills you need to modify your dietary and lifestyle habits.

How can I get dietary advice while in hospital?
During your stay at St Vincent's you will have the opportunity to see the dietitian during a group education session. These sessions are held twice a week on Monday and Friday at 11:30am. Relatives and friends are most welcome to attend the session. Written dietary information will be available to take home with you.

You may also see the dietitian on an individual basis. This way the advice can be tailor-made to suit your needs. If you need ongoing dietary advice there is an outpatient service provided by the dietitian.

The dietitian visits most patients in hospital. If your diet has not been discussed with you by the dietitian and you would like some advice, ask your primary nurse or any member of the healthcare team for a referral.

What type of meals can I expect while I am in hopital?
In hospital you will be selecting meals from a menu with mostly low-fat, salt-reduced items. Unsuitable items are marked with an asterisk (*).

The types of meals you will receive are a good example of what healthy eating for the heart involves.

Why should I eat less fat?
Eating less fat, especially fats which are firm at room temperature (e.g. butter, fat on meat, coconut oil – all saturated fats), can help reduce your cholesterol levels which can in turn reduce the risk of heart disease. It also helps keep your weight under control.

Being overweight is a risk factor for heart disease, hypertension and diabetes. The dietitian will explain all about how to have a healthy diet in the group education session.

What about salt?
For the first six weeks following your surgery you should cut down your salt intake. This is important because surgery causes fluid and salt to be retained in the body.

To prevent any excessive fluid retention, you need to avoid adding salt to your meals at the table and reduce or eliminate salt used in cooking. You should also reduce salty and processed foods and takeaways.

Check with your doctor to see if it is necessary to continue this salt restriction after six weeks.

Will I feel like eating after my surgery?
Following surgery you may lose your taste for food. This is a side effect of the medication and the surgery. Your appetite will return when the medication is stopped.

After the surgery you will need to eat a wide variety of foods including lean meat and low-fat dairy products to help your body heal.

Alcohol
Unless your doctor has specifically advised you to the contrary, small amounts of alcohol may be consumed (e.g. 1–2 standard drinks per day). A standard drink is equal to 250ml of beer, 100ml of wine or 30ml of spirits.

Remember!
If you have any questions about food that you have always wanted answered, this is your chance to ask the dietitian!

Social aspects of hospital admission

The social work service at St Vincent's is designed to assist you with making your admission and return home from hospital as comfortable as possible. The social workers are experienced in helping people who undergo major surgery and are making significant changes to their lifestyle.

If you feel this service may be of assistance to you, please don't hesitate to ask your nurse at the pre-admission clinic to contact the social worker to come and meet you and discuss your needs.

The Cardiothoracic Care Centre social worker is available to help you with concerns you and your family may have regarding your stay in hospital or with any problems you encounter during your stay. These could include the following:

1. General emotional/psychological and social concerns
Being diagnosed with a medical condition that requires surgery will often impact on a person's relationships and lifestyle. Many people will have concerns related to such issues. You may also have concerns about ongoing responsibilities that you will be unable to meet while in hospital and recovering from your surgery and admission.

The social worker may be able to assist by providing a counselling and support service to you and your family during the hospital admission, as well as assessing your needs and referring you to a suitable service for assistance where appropriate.

2. Financial matters
Patients who are employees, who are in receipt of government benefits or who are self-employed may have concerns about sick leave entitlements and/or benefit payments while they are unable to work. The social worker will be able to advise patients and/or their families about their entitlements and where necessary, will be able to liaise with employers, insurers or government departments.

3. Veterans Affairs Cardholders
Patients who are in receipt of a Veterans Affairs pension may be eligible for a range of benefits from the Department of Veterans Affairs –

including a period of convalescence following your hospitalisation, physical rehabilitation treatment, transport to and from hospital and home help on your return home. The social worker will be able to advise on what services you may be eligible for and will be happy to contact the Department of Veterans Affairs on your behalf.

4. Returning home following your operation

Your doctor will explain to you how you are likely to feel and how much you will be able to do for yourself by the time you are ready to leave hospital and return home. Most, but not all, local councils are able to provide assistance with basic cooking, cleaning and shopping tasks to people at home. The social worker will be happy to confirm for you if you are eligible for these services in your local area and to make any arrangements you may require.

However, as well as provision of any home services for which you may be eligible, it is usually reassuring and helpful for most people to also have someone close to them home with them all day, at least initially, on return home from hospital.

5. Patients and their families who live more than 100km distance from St Vincent's

If you are required to attend a hospital more than 100km from your home for medical treatment, both you and the person who accompanies you may be eligible for the government Patient Transport Assistance Scheme which provides a small subsidy to assist with recompense of travel and accommodation costs at these times. Application forms are available from the reception desk on the fourth floor of St Vincent's Inpatient Services Building.

If you believe you may be eligible for this subsidy, please ask for a copy of the application form at reception on arrival for your pre-admission appointment. Remember to mention if you are from Victoria or New South Wales, as the forms are different for residents of each state.

Also, don't forget to keep any tickets you may have for your travel and always ask for a receipt for any accommodation costs to send in with your application. Proof of costs is required to obtain the subsidy.

The forms also have sections which must be filled in by both the doctor who looks after you here at St Vincent's and your local doctor, confirming that you needed to be treated here. Ask your doctors to fill these in for you when you see them. If you have any further difficulties, please discuss these with your nurse.

PART B

Introduction

A general overview of risks associated with this surgery

A doctor has a duty to warn a patient of a material risk of proposed treatment. A material risk is one to which a reasonable person in the patient's position would be likely to attach significance. There must be an overriding concern for the patient's best interest in the provision of information.

To serve this purpose, Part B of this brochure explains in some detail the possible risks associated with the procedure.

You are invited to read this section if you so desire, so that you can discuss the risks involved with your surgeon or cardiologist.

The operative procedure

The operative procedure performed on the heart takes place through extensive surgical exposure and involves a high degree of technology and expertise on the part of highly trained surgeons,

anaesthetists, perfusion specialists and nursing and ancillary staff. The entire process is extremely complex but has a very low mortality and complication rate because it is performed frequently and therefore all members of the team are highly skilled and practised in every aspect of the procedure. Despite this complications may occur.

Specific measures which may be taken by the patient to minimise risk

Risk is minimised by cessation of smoking, weight control, appropriate adherence to prescribed medication and advice about activity.

Blood transfusion

Pre-operatively some patients express fears about blood transfusion. The average requirement for blood for cardiac surgery is one to two litres per patient, which means that many patients have no blood given at all. This process is assisted by the return to the patient of shed blood both during the operation and after it. Some patients will also be able to donate blood for themselves and have this kept for their operation.

This is relatively difficult and somewhat dangerous in most cardiac patients because of the nature of their illness, which makes blood donation relatively more risky for them. However, patients who are having cardiac operations which are entirely elective and who are not suffering from serious symptomatic coronary artery disease or cardiac valvular disease may be able to avail themselves of this opportunity and so further reduce the possibility of the need for transfusion. In such circumstances your surgeon would be happy to make the appropriate arrangements and to decide on your fitness for such a procedure.

Religious objections

Jehovah's Witnesses will not accept the transfusion of blood or blood products and will not accept their own blood if it is stored and administered to them at a later time. However, the majority of these patients are prepared to receive their own blood at the time of the operation and in the immediate post-operative period provided that it is not separated from them and is returned immediately.

Both the BRAT machine, which permits the return of shed blood during the operation, and the re-transfusion devices used in the Intensive Care Unit fulfil the requirements of most of these patients, provided that extra care is taken not to separate the reservoir from the patient at any time.

Complications

Heart failure

This may relate to the operative procedure or the period following it. During the operation the most common problem that arises is an inability for the patient's heart to recover from bypass easily.

Sometimes this situation may be the result of technical problems associated with the surgery, but this is rare and most often the problem arises because the heart has a degree of failure pre-operatively due to its poor blood supply. This can be diagnosed pre-operatively with the angiogram.

If there is heart failure post-operatively the patient may require special drugs to help the heart function more efficiently. Occasionally a special pump is required which can be inserted post-operatively, and which helps the heart to deliver blood more effectively to the body.

If the problem persists into the post-operative period it can result in a prolonged and difficult stay in the Intensive Care Unit with a need to continue support on the ventilator and administer special drugs for a prolonged period.

Sometimes, particularly in the case of severe infection, a patient can become very ill and eventually die. We emphasise that this is uncommon and is usually foreseen by the treating team before the operative procedure because of the severity of the patient's illness.

Bleeding

Other problems include increased bleeding after the operation. This may occur because of the scope of the operation.

Heparin, a drug used to stop blood clotting, is used during the procedure so that the blood will not clot when it is circulating through the heart-lung machine. If taken in the week prior to surgery, drugs which interfere with clotting such as aspirin and the anti-

arthritic agents will also increase the risk of bleeding. If this does occur and does not respond to treatment with drugs and blood products, it may be necessary for the patient to be returned to theatre for further examination.

Such an operation/procedure is not normally associated with an increase in risk and is best looked upon principally as an inconvenience, accepting that any further operative procedure has some risk associated with it. Without such re-operation uncontrolled bleeding may continue.

Strokes
Rarely temporary loss of power and movement or other forms of stroke may occur. In very few instances patients can suffer from permanent impairment from such strokes.

Anaesthetic complications
Anaesthetic complications during cardiac surgery are not much different from those associated with an anaesthetic for any other operation. Although very rare, they can occur, and include such things as reactions to drugs or blood products or damage to teeth. We stress that these are extremely unusual. In addition there may be complications related to the monitoring lines inserted by the anaesthetist. Again the risks involved are very low.

General illnesses
Bypass will also increase the severity of any other pre-existing illness. Any dysfunction of the kidneys is usually made worse as is any dysfunction of the liver. The management of diabetes increases in complexity for a time, but this is usually easily managed. In diabetic patients there is an increased risk of infection which causes a slight increase in the risks.

Infection
Infection in general is a remote possibility. It may cause a particular problem if it involves the breastbone and structures in the chest. Further surgery for this may be required. Sometimes prolonged and difficult hospitalisation occurs. Minor infections involving the superficial parts of the wound on either the chest or the leg incision occasionally require re-admission to hospital if they flare up after the patient returns home.

The intravenous drips and other lines which are placed by the anaesthetist in the post-operative period may become infected and may cause bruises or swellings, but these are rarely serious.

Patients sitting upright in Intensive Care following cardiac operations may compress the sciatic nerves and develop painful soles of the feet. This can be quite a difficult problem and is managed by keeping the patient as flat as possible until their body tissues have warmed.

Many patients have temporary dysfunction of the nerve supply of the diaphragm, usually on the left side where the internal mammary artery is taken. The diaphragm may take some time to return to normal function so you may experience breathlessness. If the pleural (lung) cavities are opened during the operative procedure fluid may collect in the chest, and this may require drainage.

Bladder problems
Placement of the urinary catheter may be difficult in older men and sometimes requires a suprapubic catheter that is passed above the pelvic bone into the bladder. It is possible for injury to occur to the urethra in the attempts to place the urinary catheter in difficult circumstances but every care is taken to avoid this.

Disorders of heart rhythm
Thirty per cent of patients after heart operations develop a rapid, irregular heartbeat in hospital. This is called atrial fibrillation. It requires treatment, usually with drugs and occasionally by electrical shock treatment under anaesthetic. Sometimes the problem is quite difficult to manage and may take some time to overcome.

Sometimes this irregular heart rhythm may continue despite medication. In this case many patients are discharged home and are followed up by their cardiologist post-operatively.

Other rhythm disturbances (ventricular arrhythmias) arise in the basic pumping chambers of the heart. These also require specific medication, occasionally DCR, and are the principal reason for the monitoring which is performed in the early post-operative period.

Pericarditis – Inflammation of the lining of the heart
Many patients develop a noise over the heart which can be heard by the doctor in the post-operative period. This is a rubbing, creaking noise and is due to inflammation of the sac around the heart as a direct result of the operation.

Usually this does not cause the patient any inconvenience but at times the patient can become aware of a dull ache in the chest which passes through to the back and into the shoulders. The condition is usually treated with aspirin with rapid success, but sometimes requires other anti-inflammatory agents.

Occasionally patients develop post¬pericardotomy syndrome, a syndrome similar to that which occurs at times after heart attacks were the body retains fluid in the pleural (lung) cavities.

Clots on the lung
After any major operation it is possible for clots to form in the great veins and to pass rapidly and suddenly into the lungs where they may cause significant compromise to the circulation and require an immediate emergency operation.

If this occurs it is likely to be a number of days after the surgery and is usually found in those who have been bedridden prior to the operative procedure. Administration of Heparin in the post-operative period is intended to minimise the occurrence of this serious complication.

Death
In the St Vincent's Intensive Care/ Cardiothoracic Unit, as in most units across the world, the death rate is slightly over 3 per cent. This figure includes not only all those patients having booked cardiac operations but all the emergencies that come to the hospital from across the state, from interstate and from overseas.

The death rate for those having standard operations such as coronary grafts is about 1 per cent, but some sub-groups of patients who are extremely ill at the time of their surgery may carry a much greater risk.

Emergency procedures for a tear in the main artery of the body or on patients who have already had cardiac surgery

may also carry greater risk. In these circumstances it is usual to take special care to make sure that the patient and the relatives are aware of these extra risks.

In conclusion

This form of treatment is highly complex and technically demanding. It is not undertaken lightly by those responsible for your care and treatment.

It is important to remember that:

1. The risks associated with the surgical procedure are very small, particularly when compared with the risks run by those who are suffering from the diseases for which the treatment is offered.

2. The procedures are commonly performed and therefore the team is accustomed to, and practised in, all aspects of the procedures.

3. The vast proportion of patients are very pleased with their treatment, which relieves them from their initial symptoms and prevents any new symptoms from presenting.

4. A large proportion of patients are returned to a symptom-free effective working life.

5. Many patients who are now presenting for cardiac surgery are elderly. NO form of medical or surgical treatment provides any guarantees and despite the best and most careful attention from the team, occasionally patients suffer complications.

St Vincent's

Continuing the Mission of the Sisters of Charity

May 2010

Mission

Our health service is based on and driven by our quest for:
Compassion – Justice – Human Dignity – Excellence – Unity