

## Information sheet to patient before consent for anaesthesia

For your information, this is a general explanation on the anaesthesia for cardiac surgery:

### What are the procedures in a general anaesthesia?

- General anaesthesia is, simply stated, a state of drug-induced, reversible state of unconsciousness during which you will be entirely unaware of the pain and stress associated with the procedure.
- Anaesthesia for your operation shall be conducted/supervised by an Anaesthesiologist, a doctor who is specialized in this aspect of medicine. General anaesthesia is provided by a variety of drug combinations aiming to keep you asleep, pain-free and your muscles relaxed. This helps to let you undergo the surgical procedure without being aware of it, while providing the surgeons ideal conditions for operating. Prior to the anaesthetic drugs being administered, while you are still awake, the Anaesthesiologist or a doctor in his/her team would insert some vascular cannulae into your veins and artery for injection of drugs and fluids, and for monitoring your blood pressure. This may cause a little bit of pain though every care is exercised to minimize such pain by prior injection of local anaesthetic. As a part of your general anaesthesia you will also be subjected to the process of artificial ventilation whereby a tube (endotracheal tube) is inserted into your windpipe and your lungs ventilated by means of a machine (ventilator).
- During the time when you are anaesthetized, the anaesthesiologist shall be looking after your general condition and maintain your vital functions, especially your airway, breathing and circulation. He/she will be very closely monitoring some of your vital functions like your heart rhythm, blood pressure, central venous pressure, oxygenation, various aspects of ventilation, body temperature, fluid intake and output, blood loss, etc.
- While for the large majority of general surgical operations it is the usual practice to terminate and reverse the anaesthesia at the end of the surgical procedure and, thereafter, for the patient to be woken up, in the case of cardiac surgery, the standard practice is to keep the patient asleep and ventilated for the first few hours after surgery, occasionally, even longer. This allows time for the patient to stabilize, bleeding to subside, temperature to return towards normal and the severe pain associated with surgery to abate. During these hours after surgery you will continue to be very closely monitored, artificially ventilated, nursed and managed in the Intensive Care Unit.
- Once your condition is stable, the residual effects of the anaesthetic, sedative and analgesic medications are allowed to wean off. Thereafter, when you are sufficiently awake and able to breathe adequately and demonstrate adequate muscle power you will be taken off the ventilator. For the majority of cardiac surgical patients this is only a matter of few hours (1-6 hours); occasionally if you are still too sleepy, we may consider it safe to take you off the ventilator only next morning rather than in the middle of the night. However, some patients, depending on their overall general condition, the condition of the heart and lungs, and/or the type of surgery, may require a prolonged period of ventilation, extending upto several days.

### What are the possible complications?

Owing to the nature of your surgical procedure, the anaesthesiologist may need to perform a number of invasive procedures in order to institute the requisite monitoring commensurate with your condition and nature of surgery. Also he achieves the state of anaesthesia with the help of a number of different drugs. Inevitably, therefore, these multiple procedures and drugs will carry a certain risk, albeit small, but nevertheless, something that you should be aware of. Also, general anaesthesia and surgery may lead to some side-effects and/or complications, the common ones being of a relatively minor nature and self-limiting, but a few which though very rare could be of serious import and of a permanent nature.

We have outlined some of the complications below. However, we would like to assure you that, by and large, general anaesthesia is a very safe procedure in the hands of the expert anaesthesiologists who shall be rendering you this service.

- Postoperative nausea and vomiting: This is common after various types of operations and may, in part, be related to the drugs used for anaesthesia, mainly the ones used to control your pain. However, it is usually self-limiting, but if required can be effectively managed with other drugs and techniques.
- Postoperative pain: Of course, any surgical incision is painful and the surgical wound for cardiac surgery is quite big and thus a potent source for pain. However, we give you a very generous dose of medication to help minimize the pain. One of the side-effects of those pain controlling drugs is that they make you rather sleepy, apart from the sensation of nausea mentioned above. We will effectively manage your pain with medication, and the worst is usually over after the first day of surgery.
- Sore-throat like sensation: This is consequent upon the insertion of the tube in your windpipe. This generally recovers within a day or so after removal of the tube, unless the tube has been kept for an extended period, when the sore throat sensation may take longer to recover.

- (iv) Hoarseness of voice: Some patients (approximately 3-5%) develop hoarseness of voice after cardiac surgery. The percentage may be higher in certain type of surgery e.g. those involving the aortic arch. This is due to a number of causes, namely, the insertion of the endotracheal tube, the practice of using ice around the heart during surgery, the surgical procedure itself, and perhaps the use of transoesophageal echocardiography. If the hoarseness persists, we shall arrange for an expert Ear, Nose and Throat consultation, and in the majority of cases, the voice will recover to normal or near normal spontaneously or with treatment in due course.
- (v) Allergic reactions: Despite the utmost care that is exercised in obtaining history from you regarding prior experience of any allergic reactions, your system may develop allergic reaction to one or more of the large numbers of drugs that you may be administered during the period of anaesthesia and in the perioperative period. The allergic reactions are mostly very effectively managed with standard medicines. However, occasionally a reaction can be very serious and fulminant, manifesting as a life threatening anaphylactic reaction. This may be totally unpredictable.
- (vi) Injury to the lips, tongue, mouth cavity and teeth: These are not uncommon and usually caused by the procedures relating to the insertion of the endotracheal tube (laryngoscopy and intubation). Injury to the teeth may be more likely if the teeth are loose or protruding and/or if the conditions for the procedure of laryngoscopy are less than favourable. Your anaesthesiologist will discuss this with you in detail should he anticipate such difficulty.
- (vii) Difficulty in/failure to establish a secure airway: Occasionally it may be quite difficult to visualize your airway entrance (larynx) and insert the endotracheal tube. Rarely it may be even impossible to achieve tube insertion by conventional techniques. This may be caused by a variety of conditions making conditions for laryngoscopy and tube insertion very unfavourable. Your anaesthetists will assess your airway, mouth opening, neck movements, etc. and should he anticipate significant difficulty, he will inform you accordingly and discuss with you alternative techniques that he may need to adopt. Occasionally, extreme difficulty in securing an airway may become obvious only after you have been anaesthetized. The anaesthetist will take the best course of action under the circumstances.
- (viii) Awareness: During your operation and anaesthesia we take every care to ensure that you are fully asleep and, therefore, totally unaware of the procedure during this period of time. However, the possibility that you may be fully or partially awake during the operation exists, although it is very **very** rare.
- (ix) Blood Transfusion: It is quite common for patients undergoing cardiac/ aortic surgery to receive transfusion of blood and/or blood products in the perioperative period. The chances of needing such transfusions are higher if the nature of surgery is more complex and one that entails higher chances of excessive bleeding. You are advised to read the accompanying leaflet on the issue of blood transfusion. Transfusion is obviously associated with some risks despite every care being taken to render the blood safe and free of infective agents. We would only transfuse blood if, in our opinion, the risks of not transfusing exceed the risks of transfusion.
- (x) Risks associated with invasive monitoring: The various aspects of your body functions that we need to monitor entail performance of several invasive procedures. Please refer to the accompanying leaflet on monitoring procedures for details regarding the procedures and possible complications.
- (xi) Very, very rarely anaesthesia may lead to fatality. This happens either because the patient's pre-existing overall condition is so poor that the system is unable to withstand the fluctuations in the circulatory status attendant upon induction of general anaesthesia, or, consequent upon development of some catastrophic complication.
- (xii) Post-operative complications such as chest infection, stroke/neurological complications, myocardial infarction/ischaemia: These complications may occur in the post-operative period and are more likely to be related to the seriousness of the preoperative condition and complexity of surgery rather than the anaesthetic procedure itself. The surgeon would have/ shall discuss these issues with you.

The doctor(s) have fully explained the above to me (the undersigned) which I fully understand. The doctor(s) have also answered the questions that I have asked.

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Signature of Patient

\_\_\_\_\_  
Date

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