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Pharyngolaryngectomy

WHAT IS PHARYNGOLARYNGECTOMY?

This is an operation to remove the larynx (voice box) and the pharynx (the area at the back of the mouth and throat). The operation is very serious, requiring a general anesthetic and a stay of several weeks in hospital. Sometimes it needs to be carried out in two stages, the second stage being to rebuild the structures in your neck as much as possible. This will require grafts to be taken from your chest, back or forearm. You should be offered extensive pre-operative counseling in preparation for the loss of your voice, although it is possible to regain a good amount of vocalization with speech therapy. After the operation you will have to breathe through a hole in your neck which will be a permanent feature.

WHY IS IT PERFORMED?

Pharyngolaryngectomy is mostly performed to remove malignant tumors (cancers) from the larynx that have also spread into the pharynx. This procedure is used to remove a tumor as the only chance of saving your life. A pharyngolaryngectomy may also be necessary, as a last resort, when both the larynx and pharynx have been severely damaged by disease or injury.

RISKS AND BENEFITS

There are all the usual risks of surgery using a general anesthetic. Pharyngolaryngectomy is a very radical procedure, and is only used when all other methods to control or remove a tumor are inappropriate. In these circumstances it is life-saving. For the majority of patients the most serious consequence is the loss of the voice. Some form of verbal communication can be restored with the proper therapy, but nevertheless the experience will be very traumatic for both you and your family.

THE PROCEDURE

X **PREPARING FOR SURGERY**

By the time a pharyngolaryngectomy has been recommended, you will probably be in a traumatized state and in need of counseling. The procedure, and the consequences, will be explained as carefully as possible to you, and your spouse/family. The hospital staff will prepare you as much as possible for the loss of verbal communication and the sensations of taste and smell. This will be explained by the surgeon and followed up by regular sessions with a speech therapist. it may also be possible to arrange visits from a member of a pharyngolaryngectomy organization (a group of people who have already learned to live with a pharyngolaryngectomy). You will normally be admitted to the hospital several days before the operation. A thorough medical examination is given to assess the condition of your heart and lungs. Blood, urine, sputum and samples taken from the nose and throat are sent to the laboratory for analysis; blood will also be cross-matched in case a transfusion is necessary. Should the tests reveal anemia or electrolyte imbalance then you will be given a blood transfusion or an intravenous infusion of electrolytes to stabilize your condition in preparation for surgery. Bacteriological tests will

reveal which, if any, antibiotics should be used. Sometimes a physiotherapist will come to check your breathing and to help clear your lungs of mucus and sputum.

X **ON THE DAY OF SURGERY**

No food or drink is allowed after midnight. You might be given a sedative to help you to sleep. In the morning your face, neck and the areas of skin to be used in transplants are shaved, and the skin washed with antiseptic soap. Premedication is given about an hour before surgery to help you relax.

X **IN THE OPERATING ROOM**

The surgeon will work with you lying, anesthetized, on your back, with you neck extended and head turned to one side. Two curved incisions are made, one from just behind the ear to the chin, and the other low down on the neck. Another small incision is made below this to create the stoma (hole) through which you will have to breathe. A tracheostomy is performed through which the anesthesiologist can pass the anesthetic gas. If it is possible to perform a partial pharyngolaryngectomy then an incision is made in the esophagus and the affected parts are cut out. The end of the trachea is stitched to the skin at the small incision and a laryngectomy tube inserted. After the larynx has been removed the areas of pharynx affected by the tumor are cut out and the slit in the esophagus is sutured closed. A nasogastric tube is then inserted through the nose and down the esophagus to the stomach. Continuity of the esophagus with the mouth is restored by a skin graft, complete with blood supply and muscular support, taken from the chest, back or forearm. A skin graft from the thigh is used to repair the area from which the main graft is taken. A more radical version of this procedure involves the removal of part of the esophagus, and sometimes, the thyroid and parathyroid glands as well. In this case more extensive grafting is needed, and often a section of small intestine is used to replace the esophageal section removed. Some cases require a two-stage operation. The diseased tissue is removed as described above and the wound closed. Final reconstruction, using plastic surgery, is carried out about three weeks after the initial operation.

AFTER THE PROCEDURE

A laryngectomy tube is inserted in the stoma to prevent stenosis (narrowing) and to stope the air passage from being blocked by the dressings. You will be placed under observation in the recovery room while you come out of the anesthetic before being moved back to the critical care facility.

IN THE SPECIAL CARE ROOM

Your vital signs (heart rate, blood pressure, respiration, temperature) will be monitored constantly. You will wake to find a nasogastric tube in place, and possibly an intravenous infusion in one arm. The wound drains will be connected to a vacuum bottle or pump and the tube in the stoma connected to an air humidifier. The nasogastric tube will be used to maintain nutrition and for the administration of drugs. Transfusion of blood cells or electrolyte fluids will be given by intravenous infusion. You will not be allowed to swallow for several days. The profuse quantities of saliva produced at first will be sucked out of your mouth. There will be leakage through the wound, and the dressings will be changed regularly. The nurse will clean your mouth regularly to help you keep comfortable. When bowel activity resumes (as detected

by the return of bowel sounds) sterile water will be given through the nasogastric tube in careful stages. The humidifier will have to be used for several days, but in time the airways will adapt to the dramatic change in their anatomy and physiology. A spray of saline or sodium bicarbonate can be used to humidify the air when necessary. Such intermittent humidification may be necessary for several weeks; some patients may always need to use the spray. You will no longer be able to clear your lungs by coughing. Mucus and sputum are continually being produced and will have to be sucked out of the laryngectomy tube. In the immediate postoperative period the nurse will know when to apply suction, and it will probably have to be done quite frequently. A physiotherapist will come to regularly check your breathing and to help dislodge any secretions that are obstructing the airways. it is unlikely that you will suffer much pain, but any painkillers or other medications, such as antibiotics, that are necessary will be given through the nasogastric tube. You may experience some discomfort through having had your neck extended during the operation. As you will be unable to speak, you will be encouraged to communicate with the nurses by writing or other means, such as an electric signboard. The drain tubes are normally left in for about three days, or until the wound has stopped discharging. At the same time the nurse will check for any complications such as hematoma (blood accumulation). By about a week after surgery, if all has gone well, you will be able to swallow saliva without discomfort. At this stage the nasogastric tube can be removed and you can start to take food by mouth. This needs to be done carefully and you will be closely monitored to ensure there are no leaks from the pharynx into the neck. If complications arise the nasogastric tube is re-inserted. During this time you will be frustrated by reduced power of communication and you will be anxious to start talking as soon as possible. However, patience is urged as undue strain on the pharynx before it has had time to heal can lead to complications. If secondary surgery is required to complete the repair, then this will have to come first, and time allowed for the grafts to heal. The speech therapist will start to teach you how to vocalize, using air trapped in the esophagus, as soon as possible.

GOING HOME

If all goes well you should be able to go home about three weeks after all the surgery has been completed. Instruction in the care of the stoma and laryngectomy tube will be given, and if you still need suction to clear secretions from the lungs, a machine will be loaned. The laryngectomy tube may be removed after about a month, but the checkups will continue in case of recurrent disease. As well as regular medical checkups you will need counseling and advice on how to cope with a pharyngolaryngectomy. The speech therapist will help with this and you will be put in touch with a society for laryngectomy patients who will be able to provide support and counseling. Laryngectomy patients often worry about simple things and need reassurance. A common, and unfounded fear is of suffocating the in night; this does not happen and you will be able to sleep normally, and without fear.

POSSIBLE COMPLICATIONS

Because pharyngolaryngectomy is such a radical procedure postoperative complications are always a possibility. Breakdown of the wound, perhaps due to trying to swallow or talk too soon, can result in saliva and other fluids seeping from the pharynx into the neck tissues surrounding the wound. A small leakage will usually heal itself after the nasogastric tube is reinserted. If such a breakdown includes the stoma then stenosis (narrowing) might occur. This can be usually controlled by leaving the laryngectomy tube in longer; otherwise there may be a

need for further surgery. At this stage there is always the possibility that the grafts might not take, and will therefore have to be done again. Another possible problems is bleeding causing a hematoma (blood clot) under the skin flap. If the drain tubes are not blocked then this will not cause any problems. For serious bleeding, you may have to go back into surgery to have the blood vessel tied off. As well as blood, other fluids may collect under the skin flap, resulting in what is called a seroma. This is normally controlled by the drain tubes and pressure dressings. Infection is another possibility especially with bleeding, seroma and wound breakdown. Finally there is always the risk of the tumor recurring. The can only be dealt with by more extensive surgery.

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