

Coronary Care

By

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NURSING is becoming an highly specialised field and the modern nurse is required to keep pace with the rapid changes that are taking place in medical science. In the United States, Canada and other developed nations facilities for research and advanced studies are available for the nurse by which she gains professional efficiency to work in a modern hospital or an operation theatre.

One such area of specialised study is a 12-week course in "Coronary Care" by which she learns to attend to patients with cardiac involvement, primarily "Myocardial infarction." The course includes review of anatomy and physiology of the heart, taking and interpreting Electro Cardiograph (E.C.G.) recognising various types of arrhythmias (variation from normal rhythm of the heart) such as sinus arrhythmias, extra systol, heart block, auricular fibrillation, auricular flutter, paroxysmal tachycardia and especially ventricular fibrillation. After the training she also attends refresher courses, workshops and conferences concerning the subject.

The main purpose of the course is to prepare the nurse to help prevent cardiac arrest by recognising and treating arrhythmias and thus reduce the number of premature deaths.

Cardiac Care Units are well-equipped with modern medical apparatus where, besides signal bell and inter-comm, each patient has oxygen supply, suction apparatus and sphygmomanometer, important of all being the monitor placed on a shelf on head side.

A monitor is an electrical device with electrodes to interpret lead 2 of ECG. The Monitor also has an adjustable pulse metre and alarm system. The alarm will sound when the pulse beat crosses

the danger point. The monitor is connected with the central monitor machine located at the nurse's station from where she constantly observes lead 2 of the patient's ECG through an oscilloscope. As soon as any abnormality is recorded the alarm bell rings automatically and the nurse quickly administers first aid. If she recognises arrhythmia suggestive of ventricular fibrillation she will defibrillate by external defibrillator and summons the doctor at the same time. The advantage of this set up is to enable a nurse to begin immediate emergency treatment by the time the doctor arrives.

The Cardiac Care Unit is provided with a "crash cart" equipped with various drugs required to revive the heart, combat acidosis and to facilitate breathing; syringes, glucose solution, manual breathing bags and hard board for cardiac compression for use in an emergency.

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During the orientation programme nurses are also given practical training on Cardio Pulmonary resuscitation on a dummy which has metres to show the effectiveness of the procedure practised.

The nurse in this unit should also possess technical aptitude in order to recognise minor defects in the apparatus and differentiate false and true alarms. Apart from professional and specialised training certain in-born qualities like presence of mind, emotional stability, an eagle's eye and spirit of sacrifice and service are also required to work in such units.

The nurses' role in this unit is challenging, rewarding and satisfying. How exciting an experience it is for a nurse to realise the patient's pulse comes back, his chest rises up and his eyes open and a lost hope regained because of her skill and presence of mind.

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Care after 24 hours. T.P.R. should be recorded and B.P. is to be checked every 30 minutes and sedatives are to be given 8 hourly. Portable X-ray is taken on the next morning of the operation. Give oxygen inhalation on and off. Oral fluids are to be continued and watch for distension of abdomen. Oral hygiene and care of the skin are to be maintained. Changing the patient's position and deep breathing exercises should be continued. Thoracic drainage tube should be checked carefully.

Special care should be taken to see that the tube is connected to the graduated water sealed bottle and the glass rod should be always under the water level to prevent the air entering the pleural cavity. The bottle should be cleaned every day with sterile water and be replaced by sterile water. The tube is to be clamped well before separating the bottle as air will get into the pleural cavity causing atelectasis. The quantity, quality and bad odour should be carefully noted and reported. Usually the tube is removed on the 2nd day evening.

On the 3rd morning soap and water enema is given before starting on soft solids and then normal diet. In case of oesophageal operations oral feed is not started on the 3rd day.

Patient should be made to walk on the 3rd day except in case of heart condition. Alternative sutures are removed on the 5th and all sutures on the 8th day and patients are usually discharged on the 9th day unless some complications arise. Antibiotics are given till the 9th day according to the surgeon's orders and to be continued if necessary.

Health Teaching. From the time the patient is admitted to the hospital the nurse should educate the patient and his relatives on the routine health procedure adopted by her giving convincing reasons for following such a procedure. They should be told about the importance of taking the prescribed medicines regularly. Personal hygiene and follow up hospital visits should be explained and the patient should be advised to take rest for at least 3 months without exposing himself to chill.

Nursing Care For Thoracic Surgical Diseases

MINUTES can make difference in the life of any patient and therefore the nurse is required to be prompt and vigilant. The nursing care of thoracic surgical patients is one such occasion demanding special care by the attending nurse.

Apart from the usual nursing procedure followed in Thoracic Surgical Departments, the nurse should be thoroughly skilled in certain specialised techniques.

Patients with Thoracic Surgical conditions can be roughly divided into three groups. (1) With lung diseases, (2) With heart diseases and (3) With oesophageal diseases.

While the routine care is the same in all the three conditions the nurse will have to be extremely observant in noticing complications in case of heart and oesophageal diseases.

Pre-operative Preparations

(1) **General** : In general preparation the physical and psychological preparation of the patient is very important for an effective recovery.

(a) **Physical** : In preparing the patient for surgery all routine investigations of blood, sputum (in case of heart and oesophageal diseases electro-cardiogram (E.C.G) and in case of lung and oesophageal diseases, Bronchoscopy and oesophagoscopy according to the surgeon's orders should be conducted to confirm the diagnosis. These investigations help prevent complications during and after surgery.

In addition the patient should be taught breathing exercises which will be helpful in preventing post-operative complications due to insufficient oxygen entry into the lungs leading to cyanosis and death of the patient.

(b) **Psychological** : The nurse should also prepare the patient psychologically for the operation. Fear and doubt of the patient must be allayed. The Patient should be mentally prepared by

adequate explanation and assurances for the operation which will help safe and speedy recovery during the post-operative period. The nurse should win the confidence of the patient as well as his anxious relatives acquainting them with the cases of similar successfully operated patients in the hospital.

Blood Pressure

Care within 24 hours : Patient should be received in a comfortable warm bed. Oxygen inhalation should be started immediately on the arrival of the patient. Chest drainage tube is to be connected to the water sealed bottle and suction (either steadman's pump or any other available suction) to be applied according to the surgeons orders. Pulse and respiration should be checked and the blood

pressure (B.P.) be recorded very carefully and also watch for cyanosis on the finger tips and tongue. Antibiotics are to be administered as per the orders of the surgeon. She should check the drainage from the intercostal tube carefully. If the drainage is above 200 cc the surgeon should be informed so that immediate blood transfusion is given. Sedatives should be given every 6 hours in orders to relieve him of the severe pain.

Blood pressure : Observe the patient carefully taking and recording the temperature, pulse respiration (T.P.R.) and B.P. every 15 minutes. Only sips of water should be given on the first day. Care should be taken to see that the patient passes urine within 12 hours after the operation. If urine is not passed nursing methods should be tried and when these measures fail, the matter should be

reported for catheterization of the bladder.

Care of the mouth is the next important part of post-operative nursing care. Mouth washes should be given with any oral anti-septic lotion as potassium permanganate or saline.

Early ambulation and free movement of hands and legs should be encouraged to prevent thrombophlebitis and embolism. Patient should be also made to cough and to take deep breathing exercises for sufficient air entry into the lungs and to bring out any secretion (Endotracheal suction is done in some hospitals where there are facilities). The nurse must change the position of the patient frequently and care of the back and bony prominences should be given to prevent bed sores.

I. V fluids are usually given at slow rate as pulmonary oedema is a common complication after thoracic operations. Oral fluids should be given in small amounts to prevent abdominal distension. In case of oesophageal gastrosotomy or

operations on the oesophagus, when the oral fluids are restricted, I, V fluids are administered up to at least 4-5 pints within 24 hours to prevent dehydration alongwith parenteral administration of vitamins. Gastric aspiration should be done frequently and the quantity and quality of fluid aspirated each time be noted, a total 24 hours intake and out-put chart should be maintained.

Any rise or fall of pulse rate hyperpyrexia, depth, regularity and rate of respiration should be brought to the notice of the surgeon. In case of hyperpyrexia temperature should be brought down by cold application and ice mattress. Oxygen inhalation to be given continuously by poly mask or nasal catheter when care should be taken to clean the catheter every 4 hours to prevent blockage.

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