

Role of a Nurse in the Management of a Comatosed Patient

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A patient is said to be unconscious or in coma when he or she fails to respond to stimulation and cannot be roused. If he or she can be roused but rapidly lapses into unconsciousness again he or she is said to be in stupor.

The causes of coma

The common causes of coma which require nursing care are :

1. Head injury.
2. Cerebrovascular lesion such as intracerebral haemorrhage, subarachnoid haemorrhage, cerebral thrombosis and embolism.
3. Intracranial tumours.
4. Meningitis and encephalitis.
5. Narcotic poisonings (opium, barbiturate etc.)
6. Alcoholic coma.
7. Diabetic coma.
8. Hypoglycaemic coma.
9. Uraemia.
10. Hepatic coma.

Diagnosis

1. An unconscious patient is incapable of giving a history. Every scrap of evidence from others may contribute to the diagnosis. The history obtained from relations, friends and witnesses is of great importance for diagnosis of the disease responsible for the coma.

2. Physical examination and investigations contribute a lot in diagnosis.

3. A search may be made for the signs of injury and the patient should be handled with care and gentleness for he may have sustained injury as a result of a sudden fall and lost consciousness. Any bleeding from nose or ears

will indicate a fracture of the base of the skull and should be reported.

4. The skin may be cold and clammy in case of shock. In case of diabetic coma the skin may be dry. In hypoglycaemic coma the skin may be moist. Needle punctures indicate diabetic or drug addict. The odour of acetone or alcohol in the breath should be noted as the patient is put to bed. Hyperpnoea points metabolic coma.

Treatment of coma

A. GENERAL

1. *The care of the airway* must be the nurse's prime concern when caring for an unconscious patient. No delay can be allowed in clearing any obstruction which has occurred. Otherwise death may occur within seconds.

2. *The position of the patient*—An unconscious patient should always be nursed in semi-prone or prone position and never on his back. If the patient is turned on his back the tongue will fall back and obstruct the airway with fatal results. An airway may be inserted as a temporary measure. The prone or semi-prone position may help the secretions to drain from the pharynx and mouth which are accumulated because of the loss of the swallowing reflex by the force of gravity and this process is greatly facilitated by elevating the foot of the bed by 18 inches.

Aspiration from the mouth and pharynx. Electric sucker or fairly stiff catheter should be used which can be directed to the desired part of the pharynx. A soft catheter curls up in the mouth and often does not reach the back of the pharynx where the mucus usually

lies. The nurse should learn to insert these gently and depress the tongue with tongue depressor so that the tongue is depressed and the pharynx comes directly into view. It is important not to traumatise the mucus membrane. Oxygen may also be administered by a nasal tube.

Observation of the depth of coma. The temperature, pulse and respiration must be recorded on admission and then at intervals of ten minutes to four hours depending on the condition of the patient. Rise or fall of pulse, hyperpyrexia, the depth, regularity and the rate of respiration should also be reported.

A failure to stimuli indicates an increasing loss of consciousness. Loss of corneal reflex again indicates deepening coma. The pupils should be watched regularly and their relative size. The reaction of the pupils to the light should also be recorded. A difference in the size of both pupils may be indicative of the diagnosis of disease responsible for coma.

Trolley for endotracheal intubation

The following articles should be kept ready for endotracheal intubation :

1. Laryngoscope (with different size of blades).
2. Endotracheal tube cuffed (different sizes).
3. Artery forceps to clip off the endotracheal tube.
4. 10 c.c. syringe to inflate endotracheal tube.
5. Laryngeal forceps (Megill's forceps).
6. Mouth gag.
7. Mackintosh throat spray.

8. Swabs.
9. Air-way.
10. Local anaesthetic.
11. Zinc oxide.
12. Adhesive plaster and receiver.

The need for tracheostomy

Despite a good position and expert suction, it may be, in certain cases, difficult to maintain an airway, specially if there is an abundant secretion of mucus. In these circumstances tracheostomy is performed and a simple tracheostomy tube is inserted. For this purpose an emergency tracheostomy tray should be kept ready.

Feeding the unconscious patient

The maintenance of fluid balance is vital in an unconscious patient. He cannot swallow and hence nothing can be given by mouth. Gastric intubation is the best method.

Trolley for gastric intubation and Feeding

Sterile ryles tube, receiver, clip 10 c.c. syringe, funnel, plaster, swabs, bowl for sterile liquid paraffin for lubrication of tube, and milk.

The tube is lubricated and passed through one nostril by gently feeding it along. It usually passes into the stomach without much difficulty. It is almost important to ensure before feed is given that it has not entered the trachea or bronchi.

The following tests should be applied :

1. Make sure that the patient has not cyanosed.
2. Listen over the open end of the tube. If the tube is in the

trachea, the respiration can be heard.

3. Hold the open end of the tube into a bowl of water. Bubbles will appear as the patient breathes if the tube is in the respiratory tract.

4. Aspirate and see if the gastric contents can be obtained.

5. Inject 2 c.c. of sterile water. If the water enters the lung, coughing will result if the patient is not too deeply unconscious.

When giving a feed by gastric tube the fluid should be allowed to run in by gravity : the funnel being held about one foot above the patient's head. Care should be taken not to allow the funnel to empty before more fluid is added so as to avoid introducing air into the stomach.

The diet of the unconscious patient must fulfil the following requirements :

1. It must be in fluid form so that it can be given by gastric tube.
2. It must provide an adequate fluid intake to replace inevitable losses in urine, respiration and vomiting.
3. It must provide a sufficient number of calories ; an average adult requires a minimum of 1500 calories.
4. The proportion of protein, carbohydrate and fat should be correct.
5. It must provide salt, potassium, iron and vitamins. Start by giving 2 oz. of water or milk 2 hourly for the first 8 hours. Over the succeeding 24 hours 1 to 3 pints of milk with 300 grams of glucose according to the state of

hydration of the patient by hourly or 2 hourly feed.

General Nursing Care

Care of the skin. Skin cleanliness, frequent turning and proper positioning must be carried out. Hot water bottle accidents happen even with utmost care so it should be avoided. Adequate warmth can be secured by warming the bed before the patient is put into it and by keeping the patient well covered.

The temperature of the room must be 65°F to 70°F.

Care of the bladder. A patient in coma will not empty his bladder, but followed by retention will overflow. He will, therefore, need to be catheterised. If coma persists, catheterisation be replaced by tidal drainage.

B. SPECIAL TREATMENT

This is directed to the cause of coma and is primarily the doctor's responsibility. Insuline for diabetic, I.V. glucose solution for hypoglycaemic coma, low protein diet, antibiotic and duraboline for diabetic coma prove life saving.

A head injury case may require craniotomy or other neuro-surgical operation. In opium and barbiturate poisoning patient should be kept awake by drugs and specific antibiotics like lethidrone and megrimide should be given. Meningitis should be treated with specific antimicrobial drugs.

Although specific therapy is of great help in coma, general measures specified above to which nurses have to play an important role are far more important in keeping the patient alive and giving time for specific measures to operate.

Is it not living in a continual mistake to look upon diseases, as we do now, as separate entities, which must exist, like cats and dogs ? instead of looking upon them as conditions, like a dirty and a clean condition, and just as much under our own control ; or rather as the reactions of kindly nature, against the conditions in which we have placed ourselves...I have seen with my eyes and smelt with my nose small-pox growing up in first specimens, either in close rooms or in overcrowded wards, where it could not by any possibility have been "caught", but must have begun...For diseases, as all experience shows, are adjectives, not noun substantives.

FLORENCE NIGHTINGALE—Notes on Nursing