

Post-Anaesthetic Nursing Care

by C. P. Bahl, M.B.B.S.

Civil Assistant Surgeon,
Department of Anaesthesia, Irwin Hospital, New Delhi.

Introduction

Indifferent post-anæsthetic and post-operative care is responsible for most post-operative deaths, and contributes to a great extent to morbidity, delayed and unsatisfactory recovery, and prolonged hospitalisation. Awareness of this has led to the creation of recovery rooms (Intensive Therapy Units), recovery wards or post-operative wards in almost all big institutions abroad. The patients are kept there under constant supervision till they have recovered from the effects of anæsthetic and the dangerous period of anæsthetic and operative complications, is over. Such recovery- and post-operative wards are jewelled with the best available talent in the nursing and medical staff. In fact diminution of post-operative mortality and morbidity has been made possible, in a great measure, by skilful post-anæsthetic care; understanding of shock, water and electrolyte balance; consciousness to detect signs of shock and complications in their earliest stages, and institution of measures to prevent and treat them before they become irreversible.

The purpose of this article is to relate and emphasize the role which the nursing staff can play in the best interests of the surgical patient in the post-anæsthetic period.

Recovery from Anaesthesia

The period of greatest potential danger to the patient, undergoing surgery with general anaesthesia, is at the termination of surgery and before complete consciousness has returned. A patient under the influence of an anaesthetic must not be left unattended for a moment until consciousness is well established, while invigilation should continue for at least twelve hours if one of the basal narcotics has been used as an adjuvant.

The Recovery Room should be warm and free from draughts; the bed warm but *all hot water bottles must be removed till the patient is conscious*. All apparatus necessary for resuscitation including transfusion kits, bronchoscopes, suction, oxygen, mechanical respirators etc. must be readily available and in good working condition.

The *airway* of the patient must be watched and kept absolutely clear. The position of the patient should be such that any blood, mucus or vomited material in the pharynx and mouth is drained by gravity away from the tracheo-bronchial tree. This is achieved by the semi-prone position, with the head extended, prevented from rolling over by a pillow beneath the chest, and prevented from becoming supine by bringing the lower arm behind the body and lower leg flexed. This position should be maintained till consciousness is regained.

Inadequate tidal exchange, retraction of chest wall, excessive abdominal movements due to overworking diaphragm, increased pulse rate from early hypoxia, are all signs of respiratory obstruction which, unless treated, will result in hypoxia, cyanosis, and death. Slight degrees of obstruction with hypoxia may do irreparable damage to the patient.

Obstruction at the lips, or a falling back of the tongue, are treated by gentle, atraumatic insertion of the airway. Secretions, blood, vomitus, or foreign material in mouth and pharynx of tracheo-bronchial tree must be sucked out under direct vision, or if necessary by passage of a bronchoscope.

In operations on the thyroid, respiratory obstruction is usually due to pressure on the trachea by hæmorrhage, and the attending member of the nursing staff should not hesitate to cut one or two

stitches and drain out the blood. In fact, this may be a life-saving move.

Treatment of Shock

Shock in the post-anæsthetic period is mainly contributed by loss of blood or fluids, or pain due to operation. The former is treated by the administration of blood, plasma, plasma-substitutes, glucose saline or glucose solution, and, if necessary, vaso-pressor drugs; and the latter by analgesics. Care must be exercised in assuring that the blood given is compatible. Confusion may arise if two or more patients of the same name are admitted in the same ward. Requirements of sodium and chlorides are increased in patients on gastric suction or when vomiting and diarrhoea are present. It must be remembered that for 24-48 hours after operation, there is a retention of sodium, along with water, in the body and the needs of sodium during this period, are less. "In-take-out-put" charts must be maintained for all patients on intravenous therapy.

In cases of shock, over heating is to be avoided as it leads on to vaso-dilatation and consequent fall of blood pressure. Injudicious and enthusiastic application of heat may cause burns. The importance of raising the foot end of the bed in such cases cannot be over-emphasized. Sudden changes of posture are dangerous and must be avoided.

Analgesics

Few operations, however trivial, are unaccompanied by some pain; and in those performed on the abdominal contents, bones and joints, on thorax and neck, pain will be considerable. No patient should be forced to suffer pain unnecessarily, and equally, no drugs should be given needlessly. Analgesics chosen, should not depress respiration. They should be given

in the smallest effective doses, preferably intravenously, and only when needed. Dosage and frequency must depend on the needs of individual patients.

Feeding after Anaesthesia

No effort should be made to force food on an unwilling patient, who can exist quite comfortably on small drinks of water at frequent intervals. In all cases, it is wise to forbid fluids and solids for at least 2-4 hours or longer unless instructions are given to the contrary. This also applies to cases in which local analgesia of the tracheo-bronchial tree with general anaesthesia has been used (as in cases for bronchoscopy, bronchography and oesophagoscopy); otherwise passive and unconscious aspiration of the ingested or vomited material into the tracheo-bronchial tree will take place. Feeding in the immediate post-anaesthetic period increases the incidence of vomiting.

Prevention of Pulmonary Complications

Pulmonary complications occur most commonly after abdominal operations, especially upper abdominal operations, and usually those of longer duration, or those round about the mouth and nose, and more often in old, debilitated males. They may vary from mild tracheitis or bronchitis to pneumonia or atelectasis.

Excessive sedation must be avoided and the use of atropine (to lessen secretions) post-operatively, prohibited. The patient must be made to move about in bed as early after operation as possible. To prevent atelectasis, the patient should be turned in bed every hour. It must be ascertained that he takes at least a dozen or more really deep breaths every hour and coughs effectively every hour. This "shake-up" treatment may be assisted by pressure at the site of operation to lessen pain and prevent herniation. The patient must be assured to avoid hypoventilation and hypostasis. If morphine or pethidine are administered, deep breathing and coughing assume a special significance. Carbon dioxide inhalation should be avoided.

To prevent pulmonary embolism, frequent movements of legs, feet and toes must be carried out especially in old, fat and shocked patients or in patients with varicose veins. Sites of passive thrombosis—calf, groin and feet—must be watched.

Gastro-intestinal Complications

They commonly occur in women especially those who are very nervous and may range from vomiting or ileus or acute dilatation of the stomach. All patients must be reassured to lessen the incidence of vomiting. For preventing ileus, early gastric suction by Kyle's or Levine's tube, withholding fluids and solids (except sips of water) by mouth, and intravenous therapy must be instituted.

Difficulty of Micturition

It occurs in anxious, apprehensive individuals who must be reassured and allowed privacy to void urine. The careful application of hot water bottles or Sitz baths may be necessary. Catheterization should neither be a routine nor deferred too long.

Care after Spinal Analgesia

Incidence of headache is remarkably reduced if the foot end of the bed is raised for 24 hours in the immediate post-anaesthetic period. The patient should neither sit up nor walk, preferably, for 24 hours. Passive movements of legs must, however, be instituted every hour. Fall of blood pressure needs requisite treatment.

Special Care of Children

The room must be warm, draughtless and air conditioned with suitable humidity. These patients are very sensitive to loss of fluids. Intravenous saline must be diluted to N/5 or N/2 with glucose solution or distilled water. Sedatives must be given with care. Children are liable to develop hyperpyrexia easily and must be treated immediately.

Care after Cardiac and Lung Surgery

In all thoracic operations, an efficient under-water-seal connected to pleural cavity, oxygen by nasal catheter, coughing and deep breath-

ing exercises, must be instituted. The patient is made to sit up as early as possible. Drugs causing respiratory depression are used with care.

Over transfusion, especially with solutions containing saline, must be avoided in such cases as it may lead on to pulmonary oedema which may be rapidly fatal. Rapid transfusion may embarrass the already weakened myocardium and lead to heart failure.

Other Observations

During the period of unconsciousness, the arm of leg must not hang beyond the edge of the bed. The arm must not be abducted beyond a right angle or else paralysis of the upper extremity may take place.

With the use of mucile relaxants paralysis of respiration may take place in the immediate post-anaesthetic period and the anaesthetist must be summoned at once in any case of respiratory inadequacy in the immediate post-anaesthetic period.

Whenever vasopressor drugs, especially noradrenalin, are administered in intravenous drip, it must be assured that the drip is not leaking into the subcutaneous tissues. This may lead to vaso-constriction and even ischaemic necrosis or gangrene.

If dextran is to be given to a patient, a sample of blood for grouping and cross-matching must be collected beforehand because dextran interferes with blood grouping.

In hyperpyrexia, application of cold sponges or ice bags at sites of big vessels like the femoral and popliteal, axillary and brachial, rapidly brings down the temperature.

Post-operative conjunctivitis: Attention to keeping the eyes closed during the whole operation and in the immediate post-anaesthetic period till the patient is fully conscious, will mitigate this complication.

While administering intravenous fluids, no air must be allowed to run in for danger of air embolism. The pinch-cock should be applied

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