



Nursing in Times of Disaster-1

Primary Injuries

by

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IN disaster nursing it is important that a brief survey of the injuries be made so that priority may be given to the necessary life saving measures. So far as emergency care is concerned, Priority No. 1, must be given to any respiratory difficulty. Total airway obstruction is an emergency and relief must be obtained within three to five minutes after the onset of obstruction if the patient is to survive without brain damage.

The victim's appearance may vary greatly depending upon the cause, the degree of obstruction and upon whether or not there is respiratory centre paralysis from prolonged asphyxia, poisoning or electrocution. At the onset of complete airway obstruction, there may be noisy, stridulous breathing, indrawing and straining of the neck and chest area and other obvious signs of a frantic effort to regain ventilation. The face becomes suffused, livid, then cyanotic.

First Aid Treatment

First, place the patient on his back, open his mouth and remove fluid and foreign material from his mouth and pharynx with the fingers, or by turning his head to the side. Extend his head and neck to straighten out his nasopharynx so as to widen the airway to the trachea. Push or pull the mandible forward to prevent obstruction of the pharynx by the tongue. Loosen any tight clothing around the patient's neck, chest and waist. If effective breathing does not begin in a few seconds, mouth-to-mouth breathing must be started. While

this is being done, watch the rise and fall of the victim's chest. When injuries to the head or face, prevent the use of mouth-to-mouth method of resuscitation, the back-pressure, arm-lift method of artificial respiration is recommended.

Mouth-to-mouth rescue breathing is of particular value because a rescuer can sense immediately if the obstruction is persistent, and failure of air to escape from the victim's lungs is readily detected after two or three inflation efforts. If this occurs, there is urgent need for an emergency surgical airway. A nurse or anyone else who is trained in the procedure, may do a cricothyroidectomy.

Cricothyroid membrane puncture is a safe procedure even when performed by inexperienced hands, because the target is superficial, the posterior projection of the cricoid cartilage prevents posterior airway perforation.

The procedure should not be done in one hasty stab or slash. There are four steps to be followed: identify the target, make the skin incision, again locate the landmarks within the incision and open the membrane. To perform cricothyroidectomy, first identify the target. Make a transverse incision about one inch in length through the skin, directly over the membrane. Stabilize the larynx between the left thumb and middle finger and press the nail of the left index finger firmly into the cricothyroid membrane through the skin incision. Pass the point of the instrument along the fingernail with the flat side parallel to the nail, and puncture the membrane.

Open the airway by spreading the scissor blades or rotating the knife blade 90 degrees. A hiss of air and coughing will usually

occur. The opening may be maintained temporarily with a pen barrel, a piece of tubing or even a couple of keys held in the opening. Bleeding is insignificant and easily controlled. No suture is required because of the small incision. With airway open and under control, the patient can be removed to a hospital and the standard tracheostomy may then be done by the qualified personnel under unhurried conditions.

First priority considerations also include determining whether the heart is beating. If the pulse is absent and the heart sounds cannot be heard, the possibility of cardiac arrest must be considered. In such a case the heart suddenly stops. When this has occurred, closed-chest cardiac massage should be initiated.

If there is an open wound of the chest, sucking or hissing sounds are heard through the wound and forth and bubbles may be seen coming from it, it is of utmost urgency that such a wound be sealed in order to allow effective respiration. The wound should be sealed with a dressing, bandage or adhesive tape

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This subject was presented by Student Nurses of Kurji Holy Family Hospital, Patna, at the SNA Conference held in Chandigarh 1963. Miss Barbara Mallis, Student Nurse introduced the subject and the Participants, and classified the subject under four headings:

1. Primary Injuries
2. A.B.C. Warfare
3. Triage
4. Secondary Injuries.

These papers will be published in the Nursing Journal of India.