Aspiration of a foreign body is a common hazard in infancy and childhood. In the last 5 years, there has been a great effort to educate the public on the prevention of choking due to accidental inhalation of foods or small objects by children. Concomitantly, there has been a campaign to teach the first aid measures essential for evaluation and treatment of choking.

**LITERATURE REVIEW**

Much of the existing data on treating the choking child has been anecdotal. In 1981, the Committee on Accident and Poison Prevention of the American Academy of Pediatrics reviewed the available literature; the Committee recommended that a foreign body in the upper airway be considered an immediate threat to life and that such a foreign body required urgent removal. In addition, the Committee recognized the effectiveness of natural coughing and recommended that, if a choking child could breathe and/or cough, all maneuvers were unnecessary and potentially dangerous. If the choking child could not breathe, cough, or make a sound, a series of back blows and chest thrusts was recommended. The Committee recommendations resulted in a spirited controversy concerning the most effective management of the choking child.

At the July 1985 National Conference on Standards and Guidelines for Cardiopulmonary Resuscitation and Emergency Cardiac Care, the American Heart Association, American College of Cardiology, and the American Red Cross convened a panel on Management of Foreign Body Airway Obstruction to review and revise the past recommendations. The panel recommended use of the abdominal thrust—the Heimlich maneuver—as the exclusive method of treating foreign body airway obstruction for adults and children older than 1 year. No new scientific evidence was presented for the pediatric age group, but the panel agreed that, for uniformity and simplicity of teaching, management of foreign body airway obstruction in children should be the same as in adults.

The 1985 National Conference considered the fact that, for the group aged 0 to 4 years, there was a decline from 600 deaths due to choking in 1974 to 170 deaths due to choking in 1983. The National Conference also considered the potential for injury to the abdominal organs in infants 1 year of age or younger.

Because of the high risk for injuries resulting from abdominal thrust maneuvers in this age group, the National Conference concluded that these maneuvers should not be used in infants 1 year of age or less. The Surgeon General has also endorsed the Heimlich maneuver as the only method for treatment of choking due to foreign body obstruction of the airway, but, for infants aged 1 year or less, back blows are still the recommended treatment for choking.

**RECOMMENDATIONS**

In view of the above, the Committee on Accident and Poison Prevention, in concurrence with the American Heart Association and the American Red Cross, recommends adopting the following revised methods for the management of identified foreign body airway obstruction.

**If the Choking Victim Is a Small Child**

1. Apply a series of up to six to ten abdominal thrusts—Heimlich maneuver—until the foreign body is expelled. The child should be placed on his or her back with the rescuer kneeling next to him and placing the heel of one hand on the child’s abdomen in the midline between the umbilicus and rib cage.
The maneuver should consist of a rapid inward and upward thrust. An older, larger child can be treated as an adult in the standing, sitting, or recumbent (supine) position.

2. If the obstruction is not relieved using the Heimlich maneuver, open the victim’s mouth using the tongue-jaw lift; this draws the tongue away from the back of the throat and may help relieve the obstruction. If the foreign body is visualized, it may be manually extracted by a finger sweep. However, blind sweeps may cause further obstruction and thus should be avoided.

3. If no spontaneous respirations result, attempt to ventilate the victim. If unsuccessful, repeat a series of six to ten abdominal thrusts.

4. Repeat steps 1 to 3 and persist in performing the above sequences while rapidly seeking aid from emergency medical services.

If the Choking Victim Is an Infant

1. Place the infant face down on the rescuer’s forearm in a 60-degree head-down position with the head and neck stabilized. Rest the forearm firmly against the rescuer’s body for additional support.

2. Administer four back blows rapidly with the heel of the hand high between the shoulder blades.

3. If obstruction is not relieved, turn the infant over to a supine position resting on a firm surface and deliver four rapid chest thrusts (similar to external cardiac compressions) over the sternum using two fingers.

4. If breathing is not resumed, open the airway using the tongue-jaw lift technique and attempt to visualize the foreign body. No blind finger sweeps should be used.

5. If no spontaneous breathing occurs, attempt ventilation with four breaths by mouth-to-mouth or mouth-to-mouth and nose technique.

6. Repeat steps 1 to 5 and persist in performing the above techniques as needed while rapidly seeking aid from emergency medical services.

The above recommendations (to place infants 1 year of age or younger in a dependent position with head down) allow for the creation of an artificial cough, for increased intrathoracic pressure from the back blows, and for compression of the chest against the forearm; this position also allows an additional effect from gravity.

Pediatricians should be familiar with and counsel parents on choking—the dangers and prevention—as well as the proper evaluation and first aid measures for treating this emergency.

REFERENCES

Revised First Aid for the Choking Child

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