Noninfectious Irritants

Foreign Body Aspiration

Small children characteristically explore matter with their mouths and are prone to aspirate foreign bodies (FBs). Small children also place objects such as beads, toys, paper clips, small magnets, or food items in the nose, which can easily be aspirated into the trachea. FB aspiration can occur at any age but is most common in children 1 to 3 years old. Severity is determined by the location, type of object aspirated, and extent of obstruction. For example, dry vegetable matter, such as a seed, nut, or piece of carrot or popcorn, that does not dissolve and that may swell when wet creates a particularly difficult problem. The high fat content of potato chips and peanuts may cause the added risk of lipoid pneumonia. "Fun foods" such as hard candy and hot dogs are the worst offenders in terms of potential for choking. Offending foods in the order of frequency of choking are hot dogs, round candies, peanuts or other types of nuts, grapes, cookies or biscuits, pieces of meats, caramels, carrots, apples, peas, celery, popcorn, fruit and vegetable seeds, cherry pits, gum, and peanut butter. Other items include burst latex balloons, plastic or glass beads, marbles, pen or marker caps, button or disc batteries, and coins. Objects such as small lithium or cadmium batteries may cause esophageal or tracheal corrosion.

Diagnostic Evaluation

The diagnosis of FB aspiration is suspected on the basis of the history and physical signs. Initially, an FB in the air passages can cause choking, gagging, wheezing, or coughing. Laryngotracheal obstruction most commonly causes dyspnea, cough, stridor, and hoarseness because of decreased air entry. Up to half of all children with FB ingestion may be asymptomatic. Cyanosis may occur if the obstruction becomes worse. Bronchial obstruction usually produces cough (frequently paroxysmal), wheezing, asymmetric breath sounds, decreased airway entry, and dyspnea. When an object is lodged in the larynx, the child is unable to speak or breathe. If the obstruction progresses, the child's face may become livid, and if the obstruction is total, the child can become unconscious and die of asphyxiation. If obstruction is partial, hours, days, or even weeks