INTRODUCTION

With the ever-increasing popularity of compact, battery-operated electronic devices, the demand for button, coin, or disk batteries has continued to rise. Such batteries are utilized in a host of disposable objects, from watches and hearing aids, calculators, toys, and handheld electronic devices, to running shoes and musical greeting cards. Button batteries vary in weight from 1 to 10 grams, have a diameter of 4.8–6 millimeters, and have a thickness of 1.5–3.0 millimeters. The small and shiny nature of these objects make them attractive to children, and a large risk for insertion into the ears, nose, or throat. Indeed, 68% of all ingestions of button batteries occur in children younger than 12 years of age; 1 to 2 years is almost the median age for all button batteries ingested. For those ages, the probability is greatest for button batteries of all sizes to be found in the nasal cavity. The main mechanism of injury occurs from low-voltage direct current, resulting in the development of intracellular potassium that causes cell death and tissue necrosis. Other contribution to tissue damage includes direct tissue injury from leakage of toxic ions and pressure necrosisotten in 4 hours, mucosal ulceration and necrosis can develop, producing inflammation and ulceration of the nasal oropharyngeal wall. In addition, a history of the symptoms and evaluation of the primary complaint can result in a prolonged time until diagnosis is made.

METHODS AND MATERIALS

A total of 40 patients with button foreign bodies in their noses (FB) were included in the study. All patients with nasal FB were diagnosed with perforation of the septum as an acute event following removal of the foreign body. The mean age in years (and standard deviation) at presentation was 3.8 (1.5) for all patients with nasal FB; the mean age was 3.7 (1.5) for the 12 patients with nasal FB diagnosed with perforation of the septum as an acute event following removal of the foreign body. The mean age in years (and standard deviation) at presentation was 3.7 (1.5) for all patients with nasal FB; the mean age was 3.7 (1.5) for the 12 patients with nasal FB diagnosed with perforation of the septum as an acute event following removal of the foreign body. The mean duration of time between diagnosis of button battery foreign body and removal of the foreign body was 4 hours. The need for one or more procedures under general anesthesia related to the foreign body was evaluated as an outcome when the patient was no longer a pediatrician or when the foreign body was evaluated as an acute event following removal of the foreign body. The need for one or more procedures under general anesthesia related to the foreign body was evaluated as an outcome when the patient was no longer a pediatrician or when the foreign body was evaluated as an acute event following removal of the foreign body. The need for one or more procedures under general anesthesia related to the foreign body was evaluated as an outcome when the patient was no longer a pediatrician or when the foreign body was evaluated as an acute event following removal of the foreign body. The need for one or more procedures under general anesthesia related to the foreign body was evaluated as an outcome when the patient was no longer a pediatrician or when the foreign body was evaluated as an acute event following removal of the foreign body.

RESULTS

A total of 40 patients with button foreign bodies in their noses (FB) were included in the study. All patients with nasal FB were diagnosed with perforation of the septum as an acute event following removal of the foreign body. The mean age in years (and standard deviation) at presentation was 3.8 (1.5) for all patients with nasal FB; the mean age was 3.7 (1.5) for the 12 patients with nasal FB diagnosed with perforation of the septum as an acute event following removal of the foreign body. The mean age in years (and standard deviation) at presentation was 3.7 (1.5) for all patients with nasal FB; the mean age was 3.7 (1.5) for the 12 patients with nasal FB diagnosed with perforation of the septum as an acute event following removal of the foreign body. The mean duration of time between diagnosis of button battery foreign body and removal of the foreign body was 4 hours. 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