

Removal of Foreign Body Coin from upper end of Oesophagus: Is general anaesthesia always needed?

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ABSTRACT

Aims: To evaluate whether removal of foreign body coin from upper esophagus always needs GA or can be safely removed under effect of topical anesthesia and to find quicker, cost effective and safer method to combat this rapidly increasing pediatric emergency.

Methods: This study comprising 138 cases of F.B coin upper end of esophagus presented to ENT department KMU- IMS Teaching Hospital Kohat during January 2010 to April 2013. Patients were aged from 3-7 years. Ninety were males and 48 were females. Removal of coin was tried in all cases after giving topical anesthesia with 2% lignocaine gel using McIntosh laryngoscope and 10 inches long serrated laryngeal forceps. In failed cases of extraction, a short GA was needed for extraction with laryngoscope or small oesophagoscope with same laryngeal forceps or esophageal forceps.

Results: Successful removal of coin was conducted under effect of topical anesthesia in 94 cases while 44 cases needed a short GA, of these 44 cases, in 18 cases, coins were removed with laryngoscope and 10 inches long laryngeal serrated forceps while remaining 26 cases needed passage of small oesophagoscope. No bleeding or airway compromise observed during removal under topical anesthesia.

Conclusion: Removal of coin from upper esophagus under effect of topical anesthesia is safe, quicker and cost effective.

Keywords: Coin upper esophagus, topical anesthesia, general anesthesia

INTRODUCTION

Ingestion of the coins is becoming a frequent emergency in our country with introduction of two and five rupees coins. It is usually the lower end of the upper esophageal sphincter where most of the coins stuck and once this check post is passed, most of the coins go through rest of GIT to be expelled in feces. For removal of this stuck coin, different peoples adopted different approaches. Dahshan et al¹ favored bougienage to push the coin down and thought it to be safe, cost effective and shorter stay at hospital. Sandeep A et al⁶ removed the coins using Foleys catheter and claimed it to be effective and safe. Bhargava and Brown³ extracted the coins with forceps using succinylcholine and etomidate for rapid succession intubation. Javed et al⁸ who removed the foreign body coin which was stuck at upper end of esophagus in 82.1 % of their pediatrics group. They used general anesthesia, rigid esophagoscope and esophageal forceps except in 3 cases to whom they used magil forceps for removal of coins.

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METHODOLOGY

One hundred and thirty eight cases of the coin upper end of oesophagus presented to ENT department of KIMS Teaching hospital, Kohat during January 2010 to April 2013. The patients were aged 3-7 years. Ninety were males and 48 were females. In all cases history of coin ingestion was given by either parents or patient. X- Rays of neck and chest were obtained in all cases. Coins stuck at upper end of esophagus were selected for removal. Lignocaine gel which tasted sweet was given to swallow. After mucosa was anesthetized in 7-10 minutes the patients were made to lie supine with one person holding the shoulders after wrapping the patient in a shawl, while another person holding head and neck stabilize the patient. Macintosh laryngoscope introduced and coin was extracted with a 10 inches long crocodile forceps. The procedure was tried only once and if failed, a short G.A was given for removal thus preventing the patient from getting injured by repeated attempts.

RESULTS

Coins were extracted from 94 children (68.1%), using McIntosh Laryngoscope and 10 inches long crocodile forceps after topical anesthesia with 2% lignocaine gel. Forty four patients needed general anesthesia, of these 44 cases, coin could be extracted in 18(13.1%) cases using McIntosh Laryngoscope and long

crocodile forceps. In remaining 26(18.8%) of the 44 patients, extraction needed passage of paediatric esophagoscope under G.A with muscle relaxant to retrieve coin.

Table 2: Type of anesthesia with instrument (n=138)

Type of anesthesia with instrument	n	%age
2% lignocaine gel with Mac Intosch Laryngoscope/ crocodile forceps	94	68.1
Under GA with Mac Intosch Laryngoscope/ crocodile forceps	18	13.1
Under GA with paediatric esophagoscope	26	18.8

DISCUSSION

Incidence of coin ingestion in children is increasing with passage of time. So for this rapidly increasing problem a quicker, safe and cost effective strategy should be choice. Different people use d different instruments, techniques and anesthetics for removal of these coins. Dahshan AH and Donovan KG¹ used bougienage technique using little or no sedation and claimed 90% success rate and mean cost of \$ 1210 and a mean time of hospital stay of 2 hours. Bhargava and Brown² were able to extract coins in 95% of cases using rapid succession intubation under effect of succinylcholin and etiomedate. They used only forceps in 56 cases while remainder needed forceps and folly's catheter but encountered complications in 46 cases. Kursuns et al³ were successful in 150 cases of their 165 patients (96.4%) using Magil forceps. Average time taken in removal was 33 seconds. Conner⁴ compared cost of different techniques for removal of coin from esophagus which were 2701\$, 660\$ and 614\$ for endoscopic removal, removal with a Foley's catheter and bougienage respectively. Agarwala et al⁶ treated 320 cases with Foleys catheter and found it effective for removal of coin in 283(93.7%) cases. Edward et al⁷ treated 13 children with median age of twenty months under rapid succession intubation using Magill forceps in 10 cases and Foleys catheter in 3 cases.

From our study, it is evident that 94(68.1%) cases do not need general anesthesia and can safely be removed under 2% lignocaine tropical anesthesia with saving a lot of time, money. We used 10 "long laryngeal crocodile forceps having blunted and narrow jaw with lesser chances of mucosal entrapment. However there are certain points of mention while attempting this procedure. It should be attempted by someone who has previously removed coin under G.A and has a good practice of the procedure and is well versed with anatomy of the

area. Assistants should be trained enough to hold the patient firmly. The procedure should be attempted only once or at the maximum twice as repeated attempts may injure the patient. The coin may be seen or it may not be seen but a click could be heard or felt. Another point was also noted that these coins are usually lying obliquely with upper end of the coin forward while the lower end somewhat backward and if the forceps slipped over the upper end, it may escape the grip in forceps. Failure of this procedure under topical anesthesia is due to variety of facts such as vary hyperactive child with increased muscle tone ,short neck child , abnormal oral anatomy , failure on part of assistants to hold the child properly and firmly.

CONCLUSION

Removal of coin from upper esophagus under topical anaesthesia with Mac Intosch Laryngoscope and 10 inches long serrated laryngeal forceps is quick, safe and cost effective procedure in expert hands with no hospital stay and no requirement for preparation for G.A.

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