



## Prolonged Foreign Body Impaction in the Oesophagus in Mali

Sacko HB\*

Head of the Department of ENT diseases, Reference Health Centre District IV, Bamako, Mali

\*Corresponding author: Sacko HB, Chief Physician, Head of the Department of ENT diseases, Reference health center, District IV, Bamako, Mali; Email: sackohamidou85@gmail.com

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### ABSTRACT

Foreign bodies of the esophagus are common in tropical environments in childhood because very often the parents calm down children who cry by offering them parts of currencies; his last tend a put everything in your mouth especially those who are young and often inadvertently swallows them unbeknownst to parents.

The authors report 3 cases of foreign body (coins) having long stayed in the esophagus (8, 10 and 14 months). The radiological assessment allowed the highlighting of the coins, localized in the cervical esophagus.

Extraction of the coins realized favor esophagoscopy with rigid tube without major complications.

Analysis of different observations shows the particularities of clinical and paraclinical of a long-term oesophageal obstruction by the coins in children in a tropical environment.

A brief literature review was made.

Key-words: coin ingestion, oesophagus, children, tropical environment.

### Introduction:

The foreign bodies of the esophagus are a frequent emergency in ENT<sup>1-6</sup>. Clinical manifestations depend on its nature (coin, piece of meat, fishbone, denture, pin, earrings) and its location (cervical, thoracic, abdominal parts)<sup>5,7,8</sup>.

Some foreign bodies can cause acute signs that lead to diagnosis and then to extraction. Others by contrast asymptomatic initially may sit long into

the esophagus because unknown to the entourage, especially in children. Their discovery will be only during complications<sup>1,4,9-11</sup>.

These observations evoke the particularities of diagnostic and therapy in 3 young patients having long kept in the esophagus of the coins with a duration varying between 8 and 14 months.

### Clinical observations:

Case N°1: The boy M.K. 3 years, complained of chronic productive cough, often associated with mild respiratory discomfort for 10 months. The examination does revealed no notion of foreign body. According to his mother, the various consultations undertaken had always referred to the diagnosis of chronic bronchitis. The ENT examination noted no particular achievement.

The X-ray showed the presence of a metal body of rounded shape localized at the level of C5. The rigid oesphagoscopy carried out under general anesthesia allowed the extraction of a coin. We found no problems after extraction. Treatment was initiated based on an antibiotic (amoxicillin + clavulanic acid) by IV(intravenous) line, and an anti-inflammatory (morniflumate) suppositories.

Case N°2: Infant O.T. 1 year and 8 months has been in service for difficulty to swallowing, hypersialorrhea and frequent vomiting. Symptomatology was about 08 months. Taking into account the evolution of clinical signs, an x-ray of the esophagus face and profile allowed the highlighting of a metallic foreign body C6 level. Foreign body, a coin, was extracted by rigid esophagoscopy.

Antibiotic coverage (penicillin V) associated with an oral anti-inflammatory (amylase) has been prescribed. No complications were reported.

Case N°3: It's B.S., child of 3 years and 2 months complaining of drool and dysphagia for solid foods for about 14 months. At examination, the mother reported that the child had swallowed a piece of currency, but convinced that the piece was going out through natural channels sought point the medical care. An x-ray of the esophagus face and profile conducted highlighted the coin at the C6 level. A rigid esophagoscopy under general anesthesia allowed us to retrieve the coin. Preventive antibiotic treatment was carried out and no complications were observed.

All of our 3 patients have left the hospital the day of extraction.

Discussion:

The coins represent foreign bodies of the esophagus most frequent in children<sup>6,12-14</sup>. From 1 to 3 years age group is more concerned<sup>1,4,5,12,14</sup>. This can be explained by the fact that the child at this age is always a temptation to put in her mouth any object that it can hold in their hands.

The coin once swallowed by the child may be evacuated spontaneously by natural means<sup>2,4</sup> or sit long in the esophagus causing complications: obstruction of the airway compression of the trachea<sup>5,15</sup>, laryngotracheobronchitis<sup>10</sup>, perforation of the esophagus<sup>1,3,8,10,13,16</sup>, aorto-esophageal fistula<sup>17</sup>, mediastinitis<sup>7,10,14,18</sup>, paraesophageal abscess<sup>18,19,20</sup>, tracheoesophageal fistula<sup>7,14</sup>.

The existence of physiological shrinkage of the esophagus, outside history of cicatricial stenosis or congenital favour the blocking of some foreign body<sup>1,18</sup>.

The clinical signs in children with a metallic foreign body (coin) of the esophagus are varied and depend on the location of the coin and its duration in the esophagus. They are generally characterized by dysphagia, hypersilorrhea, refusal to eat, vomiting, irritant cough, often dyspnea and failure to thrive<sup>4,9,13</sup>. The occurrence of minor complications or major in childhood is determining factors in the discovery of coins who have long served in the esophagus as was the case in our different observations.

Literature evokes durations of coin in the esophagus from a few days to several years<sup>1,4,7,9,10,18,20</sup>. Most of these foreign bodies sit mostly in the upper 1/3 part of the oesophagus (the constricted oesophageal mouth)<sup>1,4,11</sup>. All of our 3 cases had cervical location.

The X-ray of the esophagus face and profile, flexible fibroscopy to highlight the metal foreign body (coin)<sup>1,2,7,16,18,21</sup>. The X-ray of the esophagus to permit without difficulty to discover coins in our patients.

The extraction of these foreign bodies in children is usually done under general anesthesia with or without intubation nasotracheal. Techniques do not differ from those used for foreign bodies not long stay, these are:

- Esophagoscopy to the rigid or flexible tube<sup>4,13,22,23</sup>.
- The retrograde esophagoscopy avoiding a thoracotomy is made from the port of gastrostomy<sup>18</sup>.
- Foley technique that uses a catheter<sup>4,13,21</sup>.
- The nasogastric tube, candles can push the foreign body and promote its spontaneous release by natural way<sup>1,13</sup>.
- And the cervicotomy used for the extraction of certain landlocked foreign bodies<sup>1</sup>.
- Complications related to the presence of these coins in the esophagus are not so rare<sup>1,4,7,14,16</sup>.

Some works evoke severe complications for coins lasted only one or two weeks in esophagus<sup>10,16,19</sup>. The occurrence of these complications would not only due to the nature of the coin (copper, silver, nickel)<sup>1,4</sup>, but above all to the vulnerability of the esophagus infection<sup>1,11,13</sup>. The septic environment of the esophagus and its close relationship with the posterior mediastinum are factors favoring dissemination of emphysema and infection<sup>1,5,7,8</sup>.

All of our patients have benefited from an esophagoscopy to the rigid tube under general anesthesia for the extraction of the coins. The operating suites were always simple.

The absence of severe complications in our subjects despite considerable periods would be surely encouraged by the beneficial importance of the reactions of fibrosis in the African<sup>1</sup>. They compartmentalize the package of fat cell of the esophagus in constituting a barrier to the spread of the infectious focus<sup>1</sup>.

In case of esophagitis or perforation secondary to the presence of the coin or its extraction, it can implement a nasooesogastric probe or a gastrostomy to allow proper nutrition of the patient and facilitate the healing of the wound esophageal<sup>1,13,21</sup>.

Antibiotic therapy of coverage is shown to minimize the risk of bacterial complications<sup>1,9,13,16</sup>.

## Conclusion

Coins having long stayed in the esophagus of the child constitute a relative reported emergency. They are often discovered during chronic or recurrent disorders of upper aerodigestive tract. Their diagnosis

is often banal. The cervical esophagus is the frequent site of location of those coins. Their extraction is essentially done by rigid esophagoscopy under general anesthesia. Complications are exceptional. Antibiotic prophylaxis to prevent the often severe complications.

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