COMMENT

The Egyptian technique revisited (Sersar-Mansoura technique).
How to remove some inhaled foreign bodies through rigid bronchoscopy without using a forceps

A Técnica Egípcia revisitada (Técnica de Sersar-Mansoura): como remover alguns corpos estranhos inalados através de broncoscopia rígida, sem recorrer ao uso de fórceps

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The most common cause of accidental death at home among children under 6 years of age is foreign body aspiration (FBA).

A high index of clinical suspicion, combined with the medical history, physical signs and radiology is more conclusive than any one of these in isolation. The greater the availability of expertise and endoscopic equipment the more likely there is to be a favorable outcome without significant morbidity and mortality.

In order to limit the risk of complications, early diagnosis is vital and this is why fiberoptic bronchoscopy is so valuable in diagnosing suspected inhalation when there is no clinical or radiological confirmation. Rigid bronchoscopy is the only procedure that allows diagnosis and removal of the foreign body (FB).

Kiyan et al. found the clinical history and symptoms to have highest sensitivity compared to physical examination and radiology. They found the radiology to have the highest positive predictive value while physical examination had the highest negative predictive value and the clinical history the lowest.

Radiological signs related to foreign body inhalation are usually due to obstruction of the valve which may be any of the following: bypass, check, ball and stop valve obstruction.

The radiological signs of FBA include hyper inflation, atelectasis, radiopaque foreign bodies, pneumonic infiltration, bronchiectasis, pulmonary abscess or no abnormality detected.

Swanson et al., proposed the following algorithm to evaluate and manage cases of suspected foreign body inhalation:

1. Rigid bronchoscopy if any of the following are present; asphyxia, a radiopaque foreign body, or associated unilaterally decreased breath sounds and obstructive emphysema.
2. Flexible bronchoscopy in all other cases.
3. If flexible bronchoscopy identifies a foreign body, a rigid bronchoscopic extraction should be performed.

Focal hyperinflation, witnessed choking crisis, and elevated white blood cell count are closely associated with FBA; bronchoscopy is strongly recommended in the presence of at least 2 risk factors when FBA is suspected.

Cohen et al., 2009 suggested the following algorithm for cases with history suggestive of FBA:

1. For symptomatic children and/or abnormal physical findings and/or abnormal chest x-ray; either flexible or rigid bronchoscopy is indicated. If flexible bronchoscopy shows a FB, then rigid bronchoscopy is indicated to extract it. The indications for rigid bronchoscopy are; asphyxia,
The Egyptian Technique (Sersar Technique); Mansoura Technique

1. It is not possible in all cases and it requires very good cooperation and harmony between the anesthesia and thoracic surgery teams.8-11

Harischandra et al.12 stated that during pin extraction, it is important to ensheathe the pointed end within the bronchoscope to protect the bronchial mucosa from damage. Two methods have been described, one using extraction forceps and the other using postural drainage to assist with suction, without forceps (the Sersar or Egyptian technique). When the pin point is impacted within the mucosa, pushing the pin distally or bending it in the middle may assist dislodgement.12

It is wise to stop and repeat the bronchoscopy if there is bleeding of granulation tissues or if a part of FB is difficult to extract. A second but safer session decreases complication rates. Re-Re-bronchoscopy can even be advisable. It is better to perform a bronchoscopy to conclude that there is no FBA rather than to leave a FB in the bronchial tree.1-13,14

Delaying the removal of suspected inhaled foreign bodies to allow optimal circumstances for manipulation of the pediatric airway is a safe practice at some institutions.15 We can conclude that this new type of foreign body inhalation (veil pins), and other sharp ended and some rounded organic and inorganic foreign bodies can be removed using the Egyptian technique (Mansoura Technique) in a reasonable percentage of patients.

References