

SHARP PIN INHALATION IN TRACHEO-BRONCHIAL TREE IN WOMEN WEARING HIJAB

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ABSTRACT

Objective: To investigate the presence of sharp pin inhalation in tracheo-bronchial tree in women wearing a hijab.

Methodology: This was a descriptive study that was conducted in the thoracic surgical department in Al-Sader teaching hospital, Basra from February 2010 to March 2011. Detailed history was taken from all the patients. Clinical examination, chest radiography and rigid bronchoscopy under general anesthesia were done to all the patients included in the study. In those, where rigid bronchoscopy failed to remove the pin, thoracotomy was done.

Results: The mean age of the sample was 19.5 years. All females presented with cough while two of them had hemoptysis (5.5%) and five had unilateral wheeze on chest auscultation (13.8%). The majority (n=28, 77.8%) of pins were located in the left main bronchus. The rest were either in the right main bronchus (n=5, 13.8%) or in trachea (n=3, 8.4%). Pins from 32 (88.9%) patients were removed by Negus rigid bronchoscopy. In only 4 (11.1%) patients, thoracotomy was done to remove the foreign body.

Conclusion: Sharp pin inhalation is a serious hazard and can have lethal outcome. It commonly occurs when women hold the pins in their teeth while wearing the hijab and talking to others at the same time.

Key Words: Sharp pin inhalation, Tracheo-bronchial tree, Negus rigid bronchoscopy.

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INTRODUCTION

The incidence of aspirated foreign body is still high, particularly in the middle east^{1,2}. It cause acute respiratory distress and obstruction and even to sudden death^{3,4}. It was reported that 300 deaths occurs annually in children less than 6 years of age in united states³. It can occur in any age group; however the foreign body inhalation is a major problem in children under 6 years age^{5, 6}, and rare in adult age group.

The aim of this study was to report the inhalation of such foreign bodies in adult women

and to find the possible leading cause of foreign body inhalation and the possible ways of prevention by raising awareness.

METHODOLOGY

Thirty six female patients with a history of pin inhalation were admitted to the thoracic surgical unit at Al-Sader teaching hospital, Basra from February 2010 to March 2011. Detailed history was taken from all the patients. A history of pin inhalation was obtained in all of them. All the patients then underwent clinical examination and chest radiological examination on admission.

All females underwent bronchoscopic examination under general anesthesia using a Negus rigid bronchoscopy size 5-7 F with channel for ventilation. The pins were removed using a suitable grasping foreign body forceps. In those, where rigid bronchoscopy failed to remove the pin, thoracotomy was done.

RESULTS

The age range of the sample was 9-30 years with a mean of 19.5 years (Figure 1). All females presented with cough while two of them

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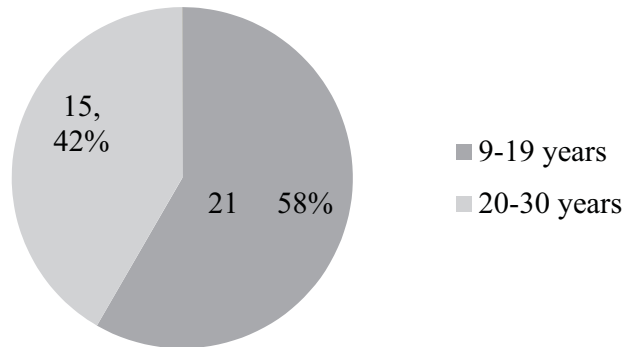
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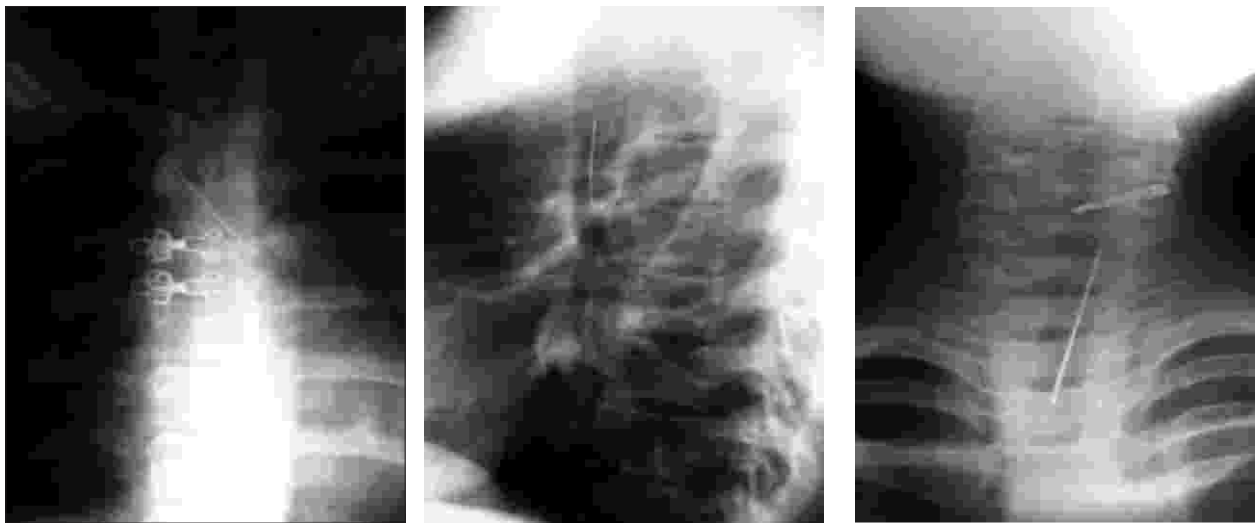
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Figure 1: Age distribution of the sample**Table 1: Clinical features of patients with pin inhalation at presentation**

Sign and symptoms	Number of patients	Percentage
Cough	36	100%
Hemoptysis	2	5.5%
Unilateral wheeze	5	13.8%

Figure 2: Chest Radiological Examination;

A.

A: Posteroanterior view

B.

B: Lateral view showing the sharp pin in left main bronchus

C.

C: Posteroanterior upper chest radiography show the sharp pin in trachea

Figure 3: Sites of Pins in Tracheobronchial Tree

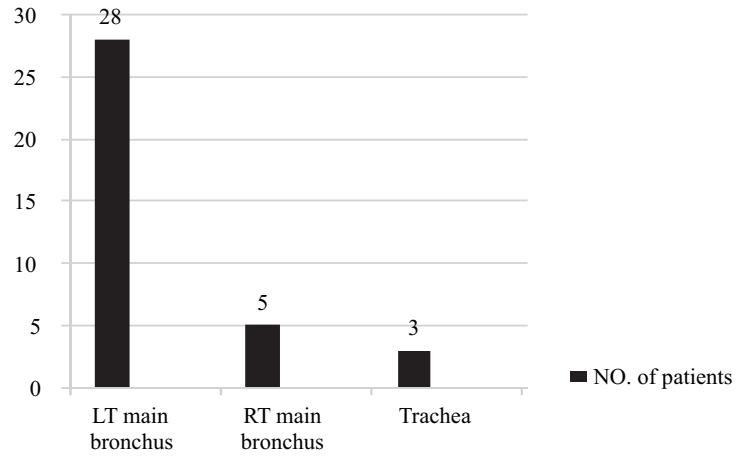
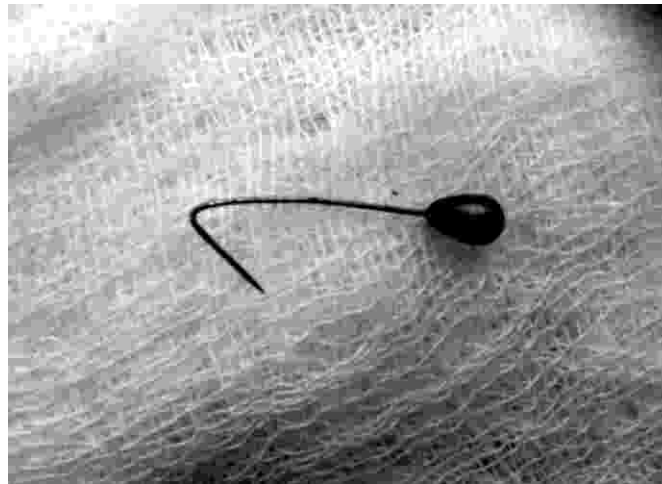


Figure 4: Bended Pins Removed By the Forceps and Bronchoscopy from the Tracheobronchial Tree



had hemoptysis (5.5%) and five had unilateral wheeze on chest auscultation (13.8%) (Table 1). The diagnosis was supported by radiological findings (Figure 2).

The majority (n=28, 77.8%) of pins were located in the left main bronchus. The rest were either in the right main bronchus (n=5, 13.8%) or in trachea (n=3, 8.4%) (Figure 3).

Pins were completely removed by bronchoscopy under general anesthesia in 32 (88.9%) patients in which nine patients with impacted pin in bronchial or tracheal wall required pins to be bended inside in order to be extracted (Figure 4).

In the remaining four (11.1%) patients, where removal through bronchoscope was not successful, pins were removed through thoracotomy.

All females had smooth postoperative period with no complication apart from chest pain in those who underwent thoracotomy.

DISCUSSION

Foreign body inhalation is a rare occurrence in young and adult^{2,7}. The majority of adults usually present with inhalation of nuts or salted seeds^{7,8} but since our study focused on sharp pin inhalation, we did not involve the data of those inhalations. The history of foreign body inhalation, which was obtained from all the patients, was similar to the reports in other studies^{9,10}.

The clinical presentation in our patients was with cough, hemoptysis, and wheeze and the majority of pins were located in the left main bronchus which is different from the reports in other studies^{11,12}. Chest radiography contributed significantly to the diagnosis and location of the pins in our patients.

Bronchoscopic removal of the pins using Negus rigid bronchoscope with suitable grasping foreign body forceps under general anesthesia were carried out in all patients with good result in 32 patients. In only four patients, thoracotomy was done to remove the pins which did not lead to the need to use instruments such as Dormia basket, Foley's catheters and magnets, suggested by other authors^{13,14}. However, we needed to bend the pins before extraction in 9 patients by the forceps and bronchoscope when the pins were penetrated in the tracheo-bronchial tree.

CONCLUSION

Sharp pin inhalation is a serious hazard and can have lethal outcome. It commonly occurs

when women hold the pins in their teeth while wearing the hijab and talking to others at the same time.

REFERENCES

1. Benyan AKZ, Al-mansouri AM. The pattern of foreign bodies inhalation in tracheobronchial tree. *Bas J Surg* 1995;1:35-9.
2. Thabet JH. Mismanagement of inhaled foreign bodies in Middle East. *Saudi Med J* 1986;7:255-60.
3. Blake RE, Johnson DG, Matlack ME. Bronchoscopic removal of aspirated foreign bodies in children. *J Pediatr Surg* 1994;29:682-4.
4. Elhassani NB. Tracheobronchial foreign bodies in Middle East. A Baghdad study. *J Thorac Cardiovasc Surg* 1988;96:621-5.
5. Tander B, Kirdar B, Rizalar R, Bernay F. Why nuts? The aspiration of hazelnuts has become a public health problem among small children in central and eastern. *Pediatr Surg Int* 2004;20:502-4.
6. Siddiqui MA, Banjar AH, Al-najar SM, Al-fattami MM. Frequency of tracheobronchial foreign bodies in children and adolescences. *Saudi M J* 2000;21:368-71.
7. Baharloo F, Veyckemans F, Francis C, Biettlot MP, Rodenstein DO. Tracheobronchial foreign bodies: presentation and management in children and adults. *Chest* 1999;115:1357-60.
8. Banejee A, Rao S, Khauna SK, Narayanan PS, Gupta BK, Sekar JC, et al. Tracheobronchial foreign bodies in children. *J Laryngol Otol* 1988;102:1029-32.
9. Asfar SN, Benyan AKZ, Salman JM. A method of anesthesia for bronchoscopic removal of inhaled foreign bodies in children. *Med J Basrah Unvi* 2002;20:74-7.
10. El-hassani NB. Tracheobronchial foreign bodies in infancy and early childhood. *Postgrad Doct Afr* 1990;13:200-2.
11. Fitzpatrick PC, Guarisco JL. Paediatric airway foreign bodies. *J Lat State Med Soc* 1998;150:138-141.
12. Ayed AK, Jafar AM, Owaged A. Foreign body aspiration in children, diagnosis and treatment. *Pediatr Surg Int* 2003;19:485-8.
13. Ross AH, Mc Commork RJ. Foreign bodies inhalation. *J R Coll Surg Edinb* 1980;25:104-9.

14. Abdul majed OA, Ebeid AM, Motaweh MM, Kliobo IS. Aspirated foreign bodies in tracheobronchial tree: report of 250 cases. Thorax 1976;31:635-40.

CONTRIBUTORS

FAA conceived the idea and planned the study. AKZB & DRK did the data collection and analyzed the study. All the authors contributed significantly to the research that resulted in the submitted manuscript.