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Iatrogenic foreign body in bronchus, rare consequence of Emergency intubation in Paediatric age group: A case report.

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Abstract
11-year-old female came to emergency department with alleged history of road traffic accident a day before with GCSE1VtM3 bilateral pupils sluggish reactive normal size. The patient was intubated in view of poor GCS the patient was kept on ventilator support in Paediatric ICU. Chest x-ray was done and showed a foreign body in right side of the lung field the patient was tracheostomized two days later in view of the prolonged ventilatory support as the diagnosis of DAI stage II with right leg distal tibia fibula fracture was made .The Patient was taken up for Flexible bronchoscopy in operating room for foreign body removal once the patient was neurologically better. The foreign body was localised with the bronchoscope but was finally removed with the help of paediatric cystoscope and its stent removal forceps. Surprisingly the foreign body was the metallic detachable bulb of the laryngoscope.Post procedural events were un-eventful.Patient vitals remained stable in ward and tracheostomy was closed 2 days after.

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I. Introduction

Airway obstruction may occur as a result of many conditions. Foreign body aspiration is one of the preventable causes of this horrible incident. After tracheostomy-bronchial foreign body aspirations, cardiopulmonary arrest and sudden death may be seen in patients, especially in children.[1] A different aspect of this weighs down when the aspiration is iatrogenic & emergency procedure is to be done, its distant rare complication doesn't come to light when the procedure is being performed.

II. Case Report

History: A 11 Yr old female was brought to triage with alleged history of RTA a day before and was getting treatment at a primary care hospital, but the patient was referred to a tertiary care hospital in view of falling GCS and was intubated outside .

Examination :
On arrival patient was E1VtM3. Patient was on Ambu ventilation . B/l pupil normal size sluggish reactive. Laceration of size 3cmX1cm was present at the occipital region with bony crepitus felt at right lower limb distally.

Hospital Stay : Patient was managed conservatively by neurosurgical & orthopaedic team in paediatric ICU . Patient was diagnosed as a case of DAI Stage 2 with tibia fibula distal fracture right leg .

Tracheostomy was planned due to anticipation of prolonged ventilatory support to the patient . Patient improved symptomatically and was neurologically better , Ventilatory support was ceased and patient came on T-piece breathing device . Chest X-rays were taken which showed a brilliant white opacity .

Once patient was neurologically better and off ventilator, case was discussed and taken up by the team of senior doctors of Subharti hospital which included anaesthesiologist, pulmonologist neuroscience , general surgery and allied specialists patient was planned for flexible bronchoscopy in OR.

Intra-OP: Patient was taken in OR, under team of experts including anaesthesiology , pulmonologist and surgery consultants.

Through flexible bronchoscope which was inserted via tracheostomy tube while Anasthesia was being maintained by ET tube the foreign body was localised in Right Main Bronchus . But the paediatric airway did not allow for the foreign body to be retrieved by flexible bronchoscope (5.0mm) and was getting slipped by its biopsy forceps .

Owing to this the paediatric cystoscope was inserted via the tracheostomy site(tube removed and then again reinserted once the scope was introduced after death placement) patient was ventilated via ET tube and with the help of the cystoscope and using its DJ stent removal forceps the foreign body was retrieved .

To our surprise the foreign body was the Detachable bulb of the laryngoscopes blade , might have slipped after the intubation of the patient.

The post procedural events were uneventful . There was no intra-op desaturation of the patient .
Patient GCS improved and chest condition of the patient became satisfactory . A X-rays was also done which showed no such foreign body as before.

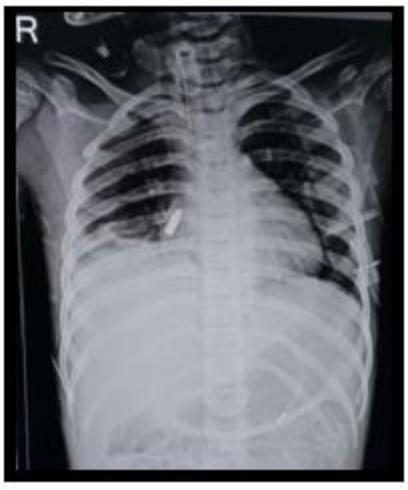
III. Discussion & Conclusion

The inhalation of such a commonly used device is potentially catastrophic to the patient with complications such as acute respiratory failure, asphyxia, mechanical trauma or perforation of the airway, bleeding of the airway due to erosive effect of the foreign body.[2]

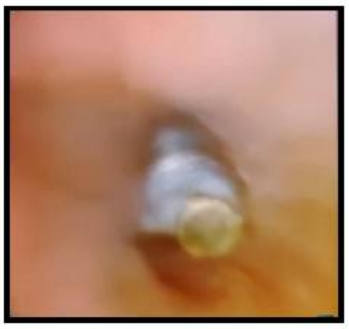
The reason for not showing any signs and symptoms of a foreign body might be its early diagnosis and the healthy condition of the paediatric lung.

It is sometimes very necessary to weigh these rare complications of using such devices which can cause iatrogenic insult to the body of the patient against the immediate intervention to be done to save the life of the patient, the early diagnosis and intervention for the patient .

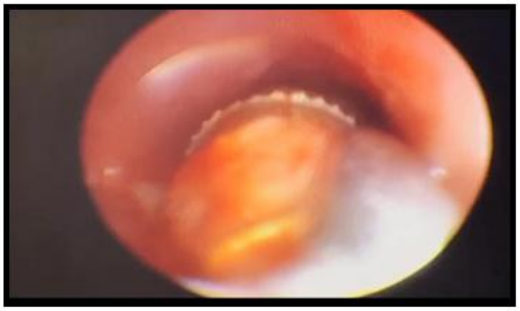
This also gives us a good heads up that all of the instruments in our emergency use should be thoroughly checked and maintained so that such incidences can be kept to a minimum.

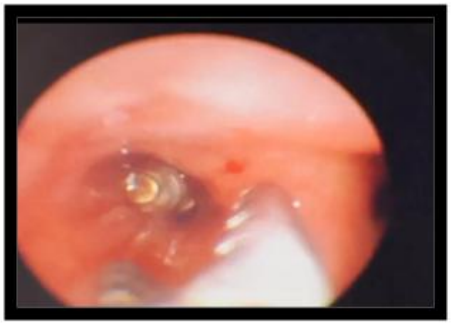


Per operative X-ray of the chest



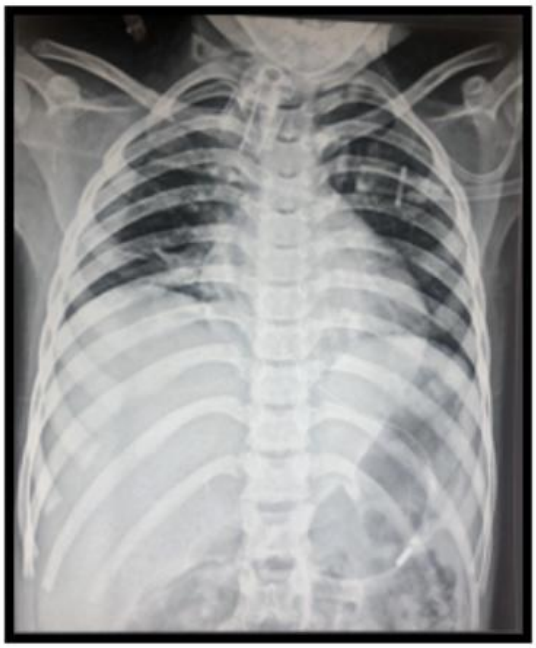
C2-C3 carinal level showing Foreign Body via flexible bronchoscope on Right side .





Clearance of the bronchial tract .

Foreign Body: laryngoscope's light bulb .



Post procedural x-ray

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DECLERATION

Conflict of interest: none

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