Case Report

Inhaled Live Fish—A Case Report

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Abstract. Foreign body inhalation is an emergency condition as it can cause sudden upper airway obstruction. It is rare in adults. They produce signs and symptoms initially which may progressively resolve and thus may be difficult to diagnose. Here, we report a rare case of inhalation of a live fish by a young fisherman. X-rays showed subcutaneous and mediastinal emphysema. Emergency tracheostomy was performed under local anesthesia. Patient, however, died the following day after the subcutaneous emphysema had spread all over the body. Bronchoscopy could not be done as the facility was not available at our centre. Postmortem showed parts of the fish at the carina of the trachea and both bronchi.

Keywords: Foreign body inhalation, subcutaneous and mediastinal emphysema, emergency tracheostomy bronchoscopy

1. Introduction

Foreign body inhalation is quite common. For instance, inhalation/ingestion of food or objects is the 5th leading cause of death in the United States. This mostly occurs in children who play with toy parts, seeds, etc. [1]. Children are vulnerable because of exploration of their environment by putting objects into their mouths, inadequate dentition, and immature swallowing coordination. In some instances older siblings have put foreign bodies in the mouths of their siblings [2].

Adult foreign body inhalation is rather rare and may be found in the mentally deranged or the unconscious patient whose capacity for protecting the airway is disrupted.

The foreign bodies inhaled may be organic or inorganic, where as the inorganic foreign bodies remain the same and so may not completely block the airway the inorganic objects absorb water and swell up with time. The foreign body may also change position with time, thus either improving the patient’s condition or worsening it [3]. The inhalation of a live organism is, however, rare and data on such cases are scanty [4, 5]. This is the objective of this report.

2. Case Report

A 20-year old fisherman presented to the Accident & Emergency Unit of a Regional Hospital (a secondary referral centre) in Ghana in severe stridor with an enlarged neck following the ingestion of a live Tilapia fish three hours prior to presentation.

This young man had tried to stabilize a fish he had caught with his teeth while preventing another fish on the ground from slipping off back into the sea. He lost his control on the fish in between his teeth resulting in the inhalation of the live
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Figure 1: Picture of patient’s neck showing tracheostomy and subcutaneous emphysema.

Figure 2: X-ray of the soft tissue lateral neck showing widened retropharyngeal space.

Figure 3: X-ray of neck (anteroposterior view) showing air trapping in the cervical fascial spaces.

3. Discussion

These inhaled foreign bodies can lodge anywhere from the larynx through the trachea and bronchi to the bronchioles and alveoli depending on the size [1].
Figure 4: Picture of the airway showing parts of the fish in the trachea and bronchi.

The clinical features, thus, depend on the location of the object. These may include stridor, intermittent cough, dyspnea, wheezing, hemoptysis, choking, suprasternal, and subcostal reccessions [6].

Various complications are also possible after foreign body inhalation. These may include lung collapse (atelectasis), pneumomediastinum, subcutaneous emphysema, pneumonia, lung and mediastinal abscesses, and death, likely to result in these complications as was seen in our patient [2].

X-rays of the neck (anteroposterior and lateral views) and chest (both on inspiration and expiration) are mostly used to help make the diagnosis [3, 6].

Whenever there is an injury to the neck as occurred in this case, management plan is largely guided by the findings on flexible fiberoptic endoscopy. In the event that significant airway edema or hematoma of the larynx is found, then CT scan of the neck becomes imperative to give an idea of the laryngotracheal framework and thus inform the need for operative intervention [7].

Resolution of symptoms follows if the foreign body can be retrieved from the airway [4]. The foreign body is removed by bronchoscopy in most cases. Bronchoscopy helps both for diagnostic and therapeutic purposes. Having both rigid and flexible bronchoscopy is advantageous as larger foreign bodies cannot be removed by the flexible scope [8, 9]. Unfortunately this was not possible at our centre since bronchoscopy is only done at the three teaching hospitals in Ghana.

In case bronchoscopy fails, thoracotomy with bronchotomy is indicated which has to be done by thoracic surgeons who only work in Accra, the capital of Ghana. Flexible nasolaryngoscopes and CT scans are not yet available at our centre.

In the case of laryngeal foreign bodies tracheostomy may be needed to relieve acute upper airway obstruction and the foreign body removed by direct laryngoscopy [3].

The economic situation of our patients greatly influences how much help by way of treatment can be given [10]. In the case we have reported, the best possible care could not be given the client since his relatives could not afford to have him referred to a tertiary centre.

4. Consent

Written informed consent was obtained from the relatives of this patient for publication of this case report and accompanying images. A copy of the written consent is available for review by the Editor-in-Chief of this journal.

5. Competing Interests

The authors declare that they do not have any competing interests.

They wish to thank the nurses who helped with the care of this patient.

They also wish to express their gratitude to the secretaries who typed this article.

References


Dear Colleagues,

Although publications covering various aspects of nuclear receptors (NRs) appear every year in high impact journals, these publications are virtually buried among an overwhelming volume of articles that are only peripherally related to NRs. The latter fact prompted a group of prominent scientists active in the field of nuclear receptor research to conclude that gathering publications on this superfamily of receptors under one umbrella would provide an invaluable resource for a broad assemblage of scientists in the field; thus the idea for a new journal, Nuclear Receptor Research, was born.

I am pleased to share with you that Nuclear Receptor Research is now a reality as an open access peer-reviewed journal devoted to publishing high-quality, original research and review articles covering all aspects of basic and clinical investigations involving members of the nuclear receptor superfamily. Nuclear Receptor Research has an editorial board comprised of a group of renowned scientists from around the world. Board members are committed to make Nuclear Receptor Research a vibrant forum showcasing global efforts in this ever-expanding area of research.

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