

Foreign Body Aspiration of Albendazole Tablet: A Case Report and Review of Literature

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Abstract

Albendazole tablet aspiration represents a rare cause of symptomatic endobronchial foreign body in pediatric emergency department. We present a patient who developed status epilepticus and cardio-respiratory arrest shortly after aspiration of albendazole tablet. Seizures were controlled but the child sustained hypoxic cerebral injury. This case calls attention to the importance of cautious use of tablet formulations in children and need for public action at the scene to save a life with quality.

Keywords: Foreign Body Aspiration; Status Epilepticus; Albendazole.

Introduction

Tablet aspiration has been reported in elderly but is uncommon in pediatric age group. We present a pediatric patient of albendazole tablet aspiration. To the best of our knowledge it has not been reported previously.

Case Report

A 2.5 years old, previously healthy girl was received with status epilepticus and cardio-respiratory arrest. Her parents gave a history of ingestion of a tablet after which the child started coughing, choking and seizing. They brought the wrapper of the tablet which was noted to be albendazole tablet of 400mg of oblong shape. She was immediately attended and chest compressions were started. Her mouth was examined for the foreign body and then intubated to continue CPR. She was resuscitated successfully and shifted to PICU for ventilator care. Her saturation and ABG were within normal limits. She was treated with injection phenytoin, mannitol, ceftriaxone,

pantoprazole and iv fluids. During endotracheal suction small white granules were retrieved. Chest radiography showed right lung collapse (Figure 1). Early bronchoscopy could not be done. Over a couple of hours, air entry was much improved and a repeat radiograph showed improved findings. Further, we checked and ensured that the tablet was fully soluble in distilled water within 30 minutes while it was only partially soluble in normal saline even after two hours. There was no tablet detected on bronchoscopy



Fig.1: Showing Right Lower Lobe Collapse on Chest Radiograph

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later on. There was mucosal hyperaemia and no necrosis. At 4th day she could be taken off the ventilator. She had high tone in all limbs and not able to follow visually and not following commands which she could do previously. On 7th day she was discharged in stable general condition. On further enquiry, the parents told that albendazole tablet was given in school by a visiting doctor. Poor parents also did not realise that intake of a tablet for intended improvement can cause such deleterious problem.

Discussion

Foreign body aspiration in children remains a persistent problem worldwide. It is responsible for approximately 2,000 deaths a year in children under 6 years of age in USA [1]. Rouillon et al described 28 children of foreign body inhalation requiring treatment in intensive care units between 1987 and 1999. Out of these, 13 cases had asphyxia with cardiorespiratory arrest. None of these cases survived irrespective of the initial treatment [2]. Most patients affected are under the age of five years. Goren S et al reported that 84% of the affected patients are below three years [3]. Reason for such a mishap may be the small age of the child not able to chew the big tablet and tendency to swallow it as such. Here comes the importance of using liquid formulations in children to avoid chances of aspiration of the tablet. Studies show that 81% of the aspirated foreign bodies are organic materials like nuts and fruit seeds [4,5,6]. Foreign body aspiration of medicine tablets is rare. Most common aspirated tablets are of iron and calcium tablets [7, 8]. Aspiration of some tablets leads to local airway inflammation and pneumonitis (ferrous sulfate, aspirin, bismuth subgallate, cholestyramine, phenobarbital, pepper, mercury, barium sulfate, mineral oil, kapectate and tetracycline [9]. In contrast ciprofloxacin/norfloxacin tablet is not associated with chemical pneumonitis possibly because it does not soak liquid and get enlarged [10,11]. As opposed to calcium tablet, Albendazole is not radio-opaque and so cannot be detected by chest radiography. It is soluble in distilled water and partially in normal saline. As it can soak water it can get enlarged in the airways and cause airway obstruction. This fact is also supported by clinical condition of our patient who had developed severe hypoxic injury by the time she reached the hospital. Albendazole solubility makes chances that on endotracheal suction with normal saline it may be suctioned up. This may be the reason of the observation that lung collapse opened up spontaneously within one day. This case is unique

because of the following points (1) tablet aspiration is uncommon in children rather it is common in elderly, (2) Albendazole tablet aspiration has not been reported previously and its pattern of bronchial injury is not known (3) It shows the importance educating care givers regarding 1] using liquid formulations in young children and 2] actions to be performed immediately at the scene by spectators. Whenever prescribing tablets for younger children a clinician should always assess the capability of the child. We also should educate the caregivers regarding these particulars; 1) the supervised intake of medications, 2) immediate manoeuvres to be done in case of such a mishap. Early at the time of ingestion when the victim starts coughing and choking, abdominal/chest blow/ Heimlich manoeuvre can result in expulsion of the foreign body and can protect the victim from morbidity and mortality. Delayed in the course these manoeuvres cannot even be applied. In conclusion this is the first case of albendazole tablet aspiration reported but it is preventable and treatable immediately if the public awareness level is increased. No child less than 3 years of age should be offered foods such as popcorn, candies and peanuts. It should be done under supervision. And during this we should encourage the child to sit quietly while eating and offer food one piece at a time.

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