

## Pediatric Aortic Injury Requiring Emergent Thoracotomy: BB Guns, Safe Child's Play?

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| <b>Supplemental Video</b>     | <a href="#">Supplemental Video</a>   |
| <b>Category</b>               | Surgery & Surgery Subspecialties   |

### Abstract

**Introduction:** The leading cause of morbidity and mortality in the pediatric population is unintentional injury. Emergent thoracotomies are rarely performed in pediatric patients, especially in the very young pediatric population. We present a case of a 10-year-old male who survived emergent clamshell thoracotomy for penetrating chest trauma.

**Case Presentation:** A 10-year-old black male presented to the emergency department by ambulance for reported "seizure" like activity at home. Physical examination identified a posterior chest wound and he was quickly moved to the trauma bay. Differential diagnosis included ballistic versus penetrating injury to the chest. Chest radiography was significant for a left sided pleural effusion, mediastinal shift, and a radiopaque foreign body in the mid-chest. He decompensated acutely requiring emergent thoracotomy extended to clamshell thoracotomy for hemorrhage control and aortic repair.

**Final:** Our patient sustained aortic lacerations after being shot with an air-powered rifle by one of his family members. His injury necessitated emergency surgery for a life threatening injury from an object considered a toy. He survived and made a full recovery without any physical or neurologic deficits.

**Outcome:** This case is one of the youngest reported survivors of an emergent thoracotomy. Air-powered gun injuries can be life-threatening despite their perception as safe toys for children. Surprisingly, there is very little regulation on sale of air-guns to minors in the United States. Increased public awareness may help prevent unintentional injury in this population.

### Learning Objectives

Discuss the risks and life threatening injuries that can occur when air-powered guns are used without proper education and pediatric supervision.

Tables and/or Figures

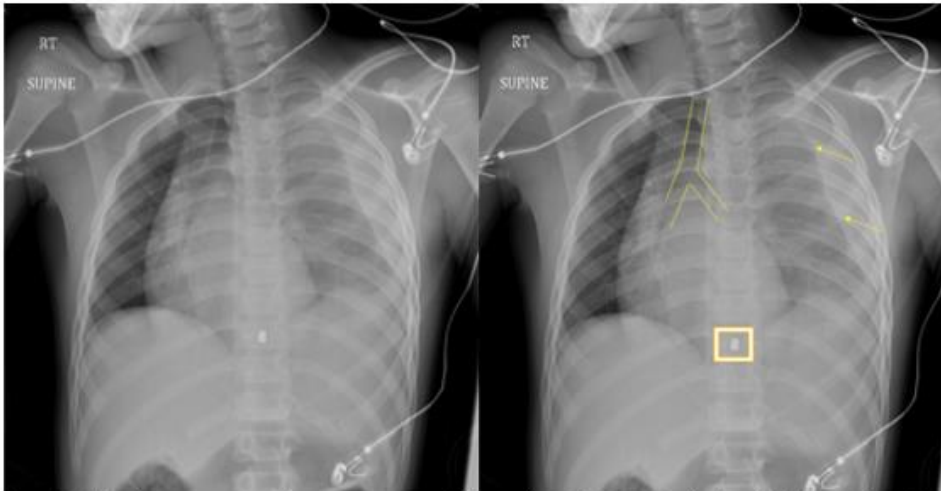


Fig 1: Initial emergency department radiography Fig 2: Medistinal shift outlined; radiopaque pellet, square