

Location of Foreign Bodies in an Adult without History or Physical Examination: A Case Study



“The Lodox full-body scanner is an excellent screening tool that can be used in the Emergency Department”

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Introduction

Patients are frequently admitted to emergency departments after foreign body ingestion and it is estimated that over 1500 people die each year in the USA alone following these incidents¹. Accurate diagnosis and treatment are therefore crucial in avoiding severe complications in the oesophagus or gastrointestinal organs². Plain X-ray imaging is frequently used in Emergency Departments (ED) for detection, assessment and treatment planning in cases of foreign body ingestion³. While most patients are children, ingestions can occur in adults who are mentally unstable, alcoholic, prisoners or drug smugglers. This study reports on the assessment of a mentally unstable patient at the Emergency Unit (EMU) of the Inselspital, Bern, Switzerland.

Case Presentation

This 19 year-old female patient was brought to the ED by family members. They reported that the patient may have ingested a foreign object, since she was observed the evening before possibly swallowing something in the bathroom. The patient suffers from a psychological disorder and was not willing to co-operate with ED staff, give a history or undergo physical examination.

Possible imaging investigations were discussed. Computed Tomography (CT) was suggested for its high sensitivity and specificity, but was not viable since the patient refused to lie in a closed scanner. The high radiation was also seen as a disadvantage. Serial conventional X-rays were dismissed because of the overlapping imaging technique, and associated radiation exposure, that would be required to locate the object/s.

Lodox scanning was chosen to provide a full-body X-ray image that could be performed in the ER. The large format image was seen as an advantage due to the marginal background information available. The very low radiation exposure was judged as safer for this young patient with limited history.

Diagnosis

The Lodox full-body X-ray image revealed two women’s razors. One was located in the upper gastrointestinal (GI) tract, the second was endovaginal. The patient was immediately referred to gastroenterology for endoscopy and further treatment.

Discussion

Previous reports have shown that emergency patients with suspected foreign body ingestion can be assessed by a full-body Lodox scanner with the same accuracy as with a conventional X-ray machine. The overall dose for emergency patients can be significantly reduced if the whole torso is scanned instead of multiple, partially over-lapping, plain X-ray investigations⁴.

This case illustrates an interesting application of the Lodox full-body scan in identifying and locating ingested foreign objects. The unique nature of this patient meant that both CT and conventional X-ray techniques were inappropriate. Owing to the large format of the Lodox X-ray image, both women’s razors were identified despite there being no information on the location of the objects. This may have been difficult using conventional imaging techniques. These advantages, together with the very low radiation dose, outweighed the lower sensitivity and specificity for some kinds of foreign objects when compared to CT imaging.

Conclusion

The Lodox scanner is a useful tool when evaluating patients with ingested foreign objects.

- References
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