

Funnel Cakes, Ferris Wheels, and Foreign Bodies

A Radiologic Case Series of Head & Neck Foreign Bodies Acquired at the County Fair

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Background

- County fairs are popular events filled with fun games and exciting rides.[1]

- They are uncommonly studied mass-gathering events from a medical sense, including the occasional food/recreational activity mishaps.[1]

- This case series focuses on a unique collection of CT images demonstrating fair-specific trauma and ingested foreign bodies, with a focus on highlighting diagnostic pitfalls.



Carolina Classic Fair

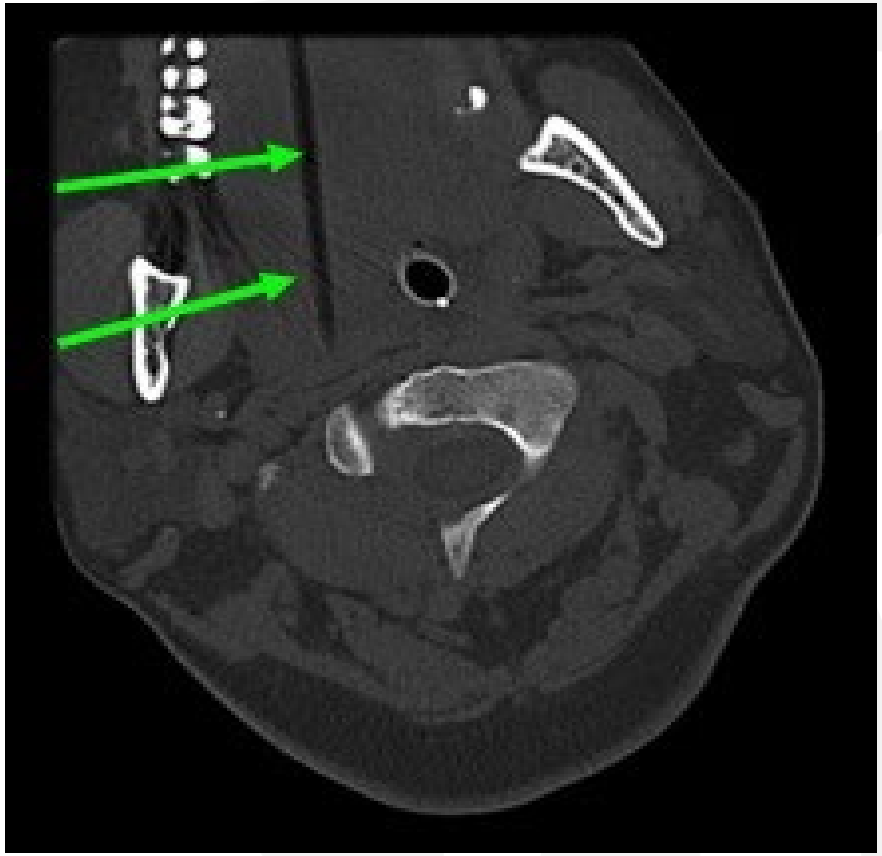
Case Series

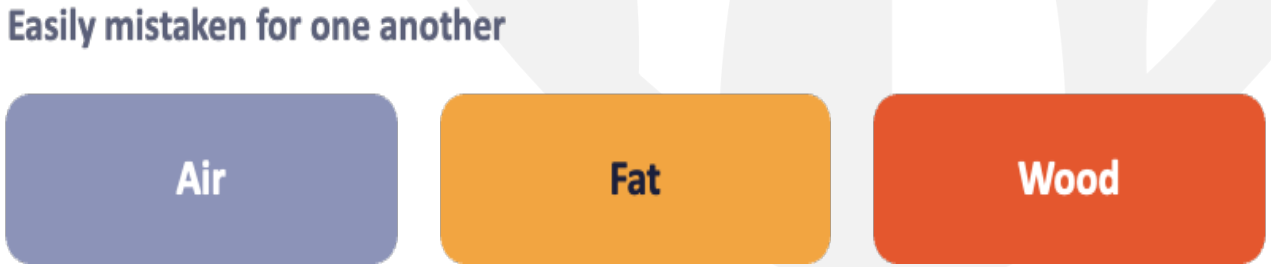
5 Five patients with interesting radiologic findings following fair-related accidents presenting to a tertiary care center were identified and included in the series.

1	2	3	4	5
Corn dog stick	**Fireworks**	**Grill brush**	**Fishbone**	**Chewing tobacco**
Near the carotid arteries	In the eye	Tonsillar crypts	Hypopharyngeal mucosal space	Lower gums

Case #1: Corn Dog Stick

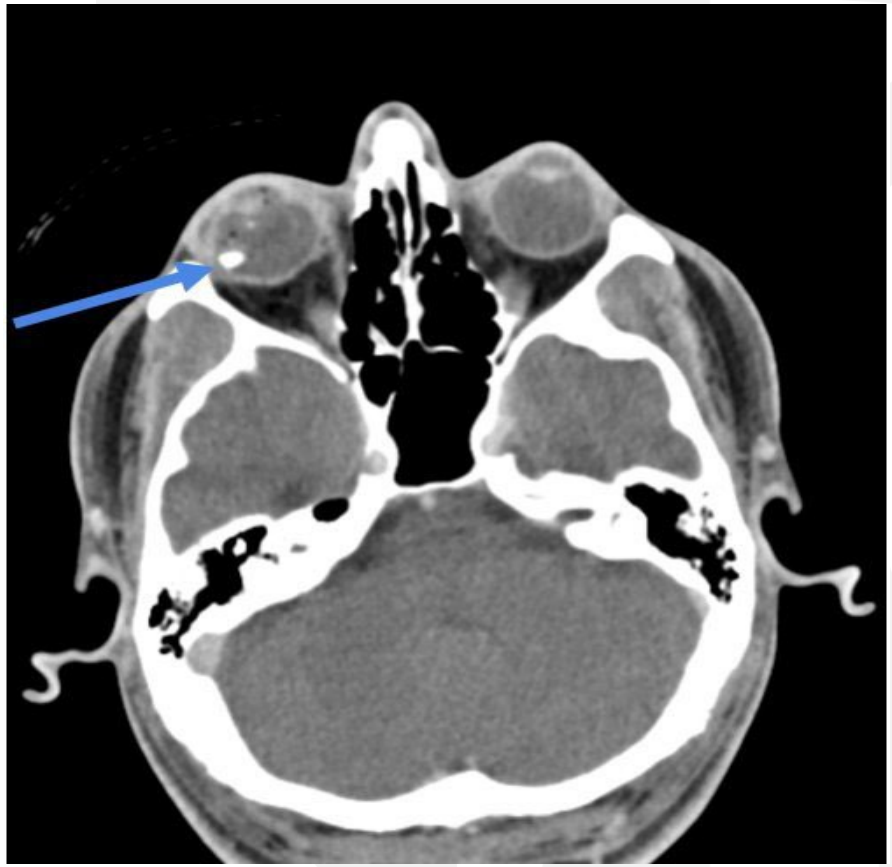
- The first patient presented with an impaled corn dog stick.
- On CT, the stick had very low attenuation, consistent with wood.
- As observed in this example, wood can easily be mistaken for fat or air.[2]
- This case highlights the importance evaluating the position of foreign bodies relative to the carotid arteries.[3]





Case #2: Fireworks in the Eye

- The next patient was found to have firework particles lodged in his eye.
- Firework debris is often a mix of plastic, paper, and organic material.[4]
- Firework debris can be poorly seen or subtle on CT, especially when small or lodged in the sclera, as conspicuity can be reduced.[5]



Halt MRI studies

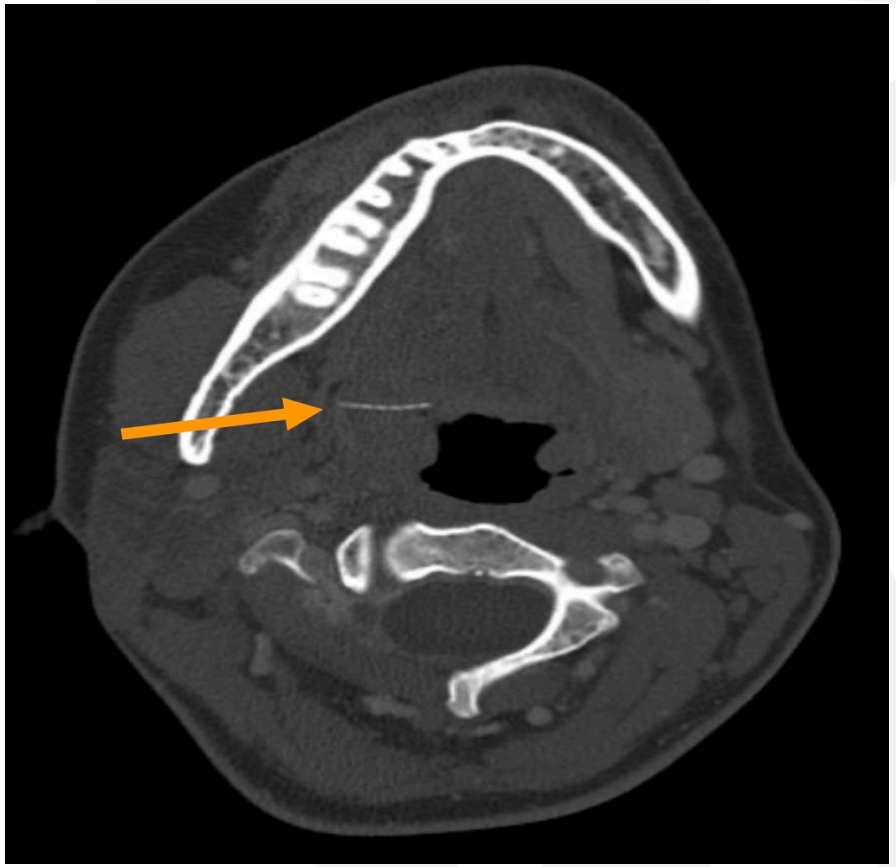
Suspicion of firework fragments should halt MRI, as they can contain ferromagnetic elements.[6]

Evaluate the eye

Globe rupture and traumatic cataracts, which appear as low attenuation areas within the lens.[7]

Case #3: Grill Brush Fragment

- This next patient's imaging revealed an impaled grill brush fragment.
- This case illustrates how foreign bodies can easily be missed when embedded in the tonsillar crypts.[8]
- More inferiorly, calcified laryngeal cartilage can also obscure foreign bodies, especially on radiographs.[8]



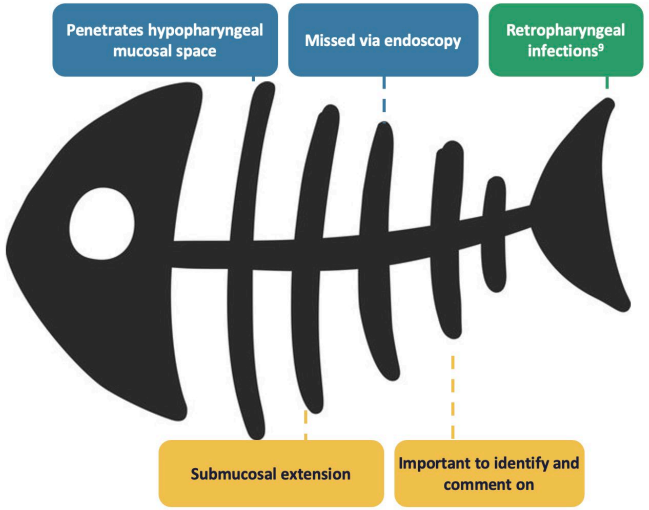
Where it hides

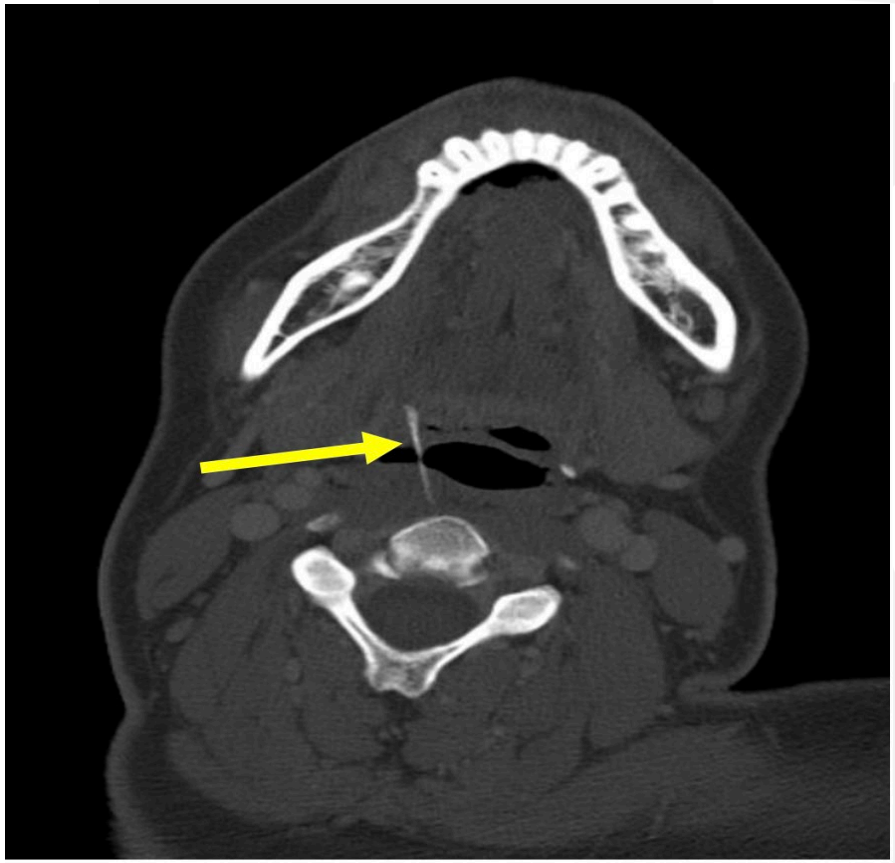
Tonsillar crypts

Calcified laryngeal cartilage

Case #4: Fishbone

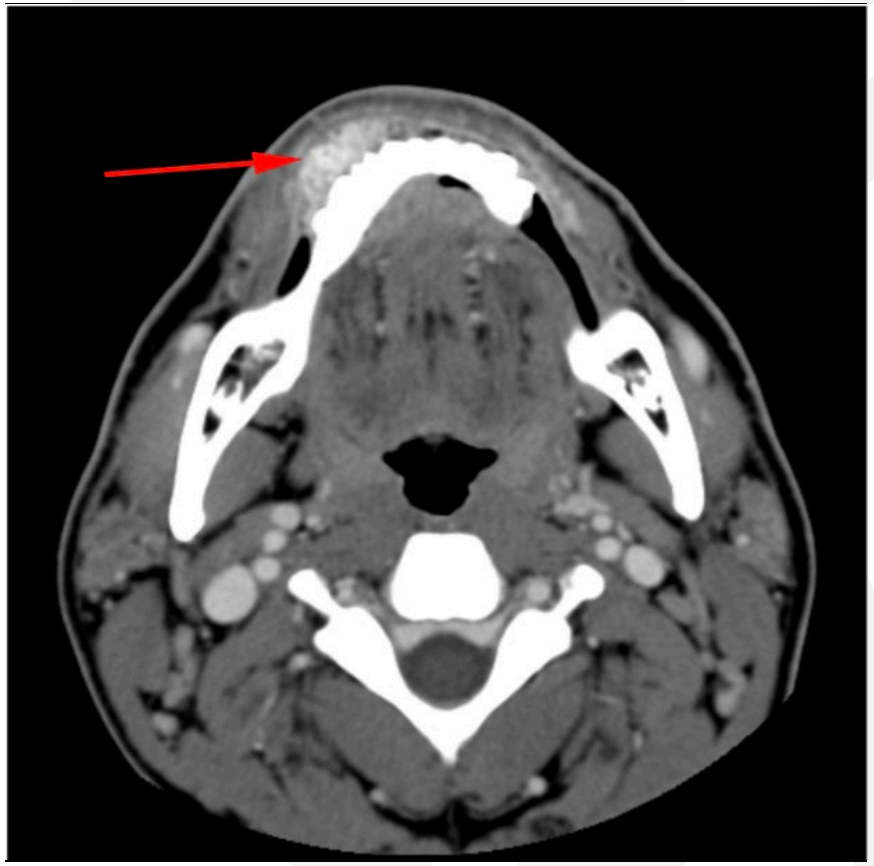
- Fishbones are another potential fair-related foreign body.
- This CT image shows a fishbone penetrating the hypopharyngeal mucosal space.
- Submucosal extension of foreign bodies is important to identify and comment on.





Case #5: Chewing Tobacco

- This patient was scanned after the fair, and chewing tobacco had been left in the lower gums.
- Given the appearance of tobacco, there was concern for a mucosal neoplasm.
- Soft comestible items are seen incidentally on CT; those with heterogeneous density can mimic mucosal lesions.[10]



Chewable items can mimic...[10]

Soft, heterogeneous	→	Enhancing mucosal lesion
Large, hard	→	Odontogenic or bony tumor
Small, hard	→	Calculi, tooth fragments, or vessels
Trapped gas	→	Abscess

Conclusion

- County fair related injuries can help reinforce systematic search patterns for different foreign bodies.
- Missed foreign bodies can lead to poorer patient outcomes
- It is critical to be familiar with the imaging appearance of different compositions of foreign bodies to aid in the selection of appropriate windowing and imaging planes to maximize detection.
- Clearly define the object/body and accurately describe its position and extent.



Resources

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Resources

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Thank You!



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