

Foreign Bodies in the Abdominal Gastrointestinal Tract: Radiological Features

Purpose

- To present the clinical and radiological features associated with foreign bodies along the abdominal gastrointestinal tract

Methods

- Consecutive patients with foreign bodies in their abdominal alimentary tract were retrospectively collected (2009-2016)

Methods

- The foreign bodies were divided into seven categories:
 - Medical Devices
 - Fish Bones
 - Elongated Metal Objects
 - Dental Related Objects
 - Drugs – “body packers”
 - Intra-rectal Objects
 - and Glass

Methods

- Two radiologists analyzed all radiological examinations in consensus, evaluating which objects were missed on X-ray and registering foreign bodies shapes and complications

Methods

- The different foreign bodies categories were statistically compared (chi-square test with post-hoc evaluation) with:
 - clinical suspicion
 - X-ray visualization
 - Presence of complications
 - and need for removal

Results

- 42 patients were included. Categories:
 - medical devices: 4
 - fish bones: 3
 - Elongated metal: 5
 - Dental: 22
 - Drugs: 3
 - Intra-rectal: 3
 - And glass: 2

Results

- Thirty-eight patients underwent X-ray and 14 underwent CT

Results

- Clinical suspicion was significantly higher in the dental category ($p=0.002$) and lower in the fish bones ($p<0.001$) and metal ($p=0.005$) categories

Results

- The complication rate was higher in the medical devices, metal, fish bones and drugs categories and significantly lower in the dental category ($p=0.002$)
- The only mortality case was due to cocaine absorption in a “body packer”

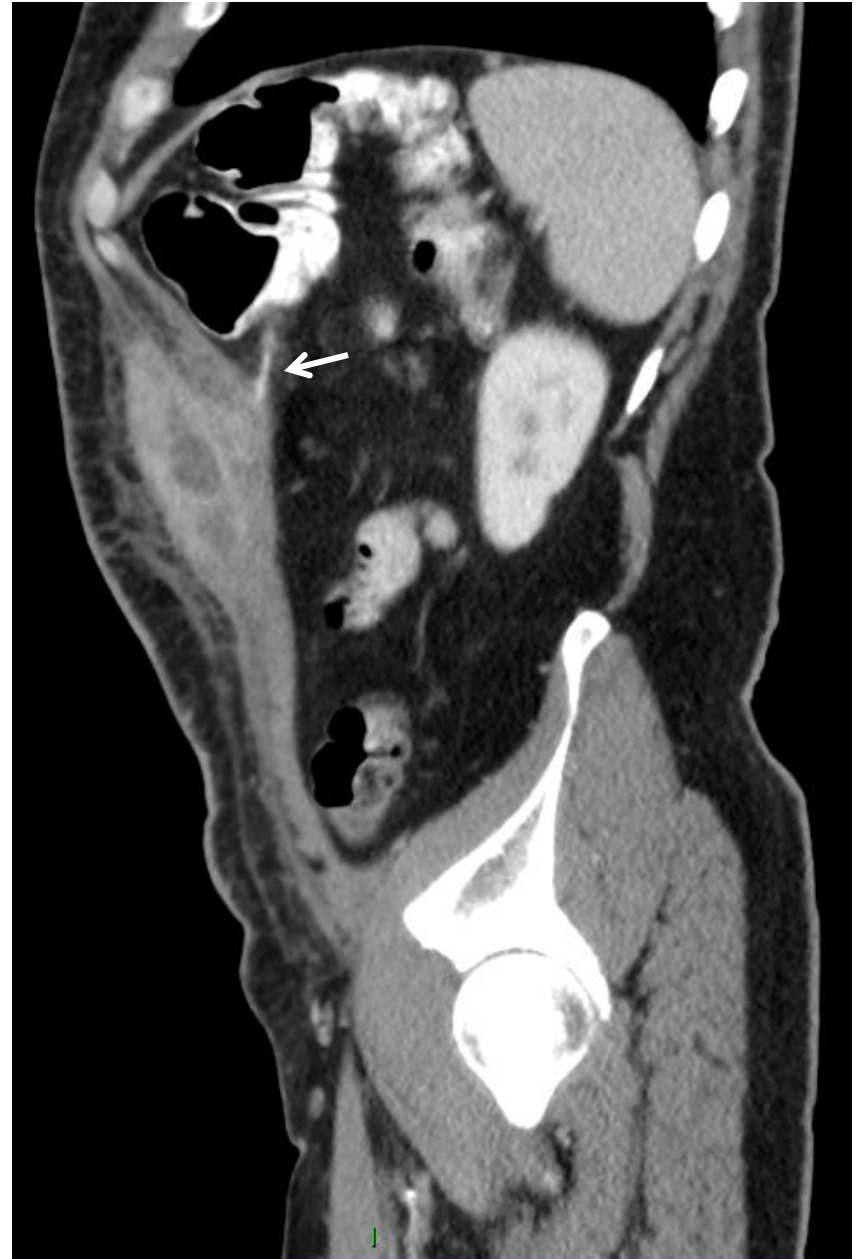
Results

- Fish bones were significantly less likely to be identified in x-ray ($p=0.005$). Dental, intra-rectal

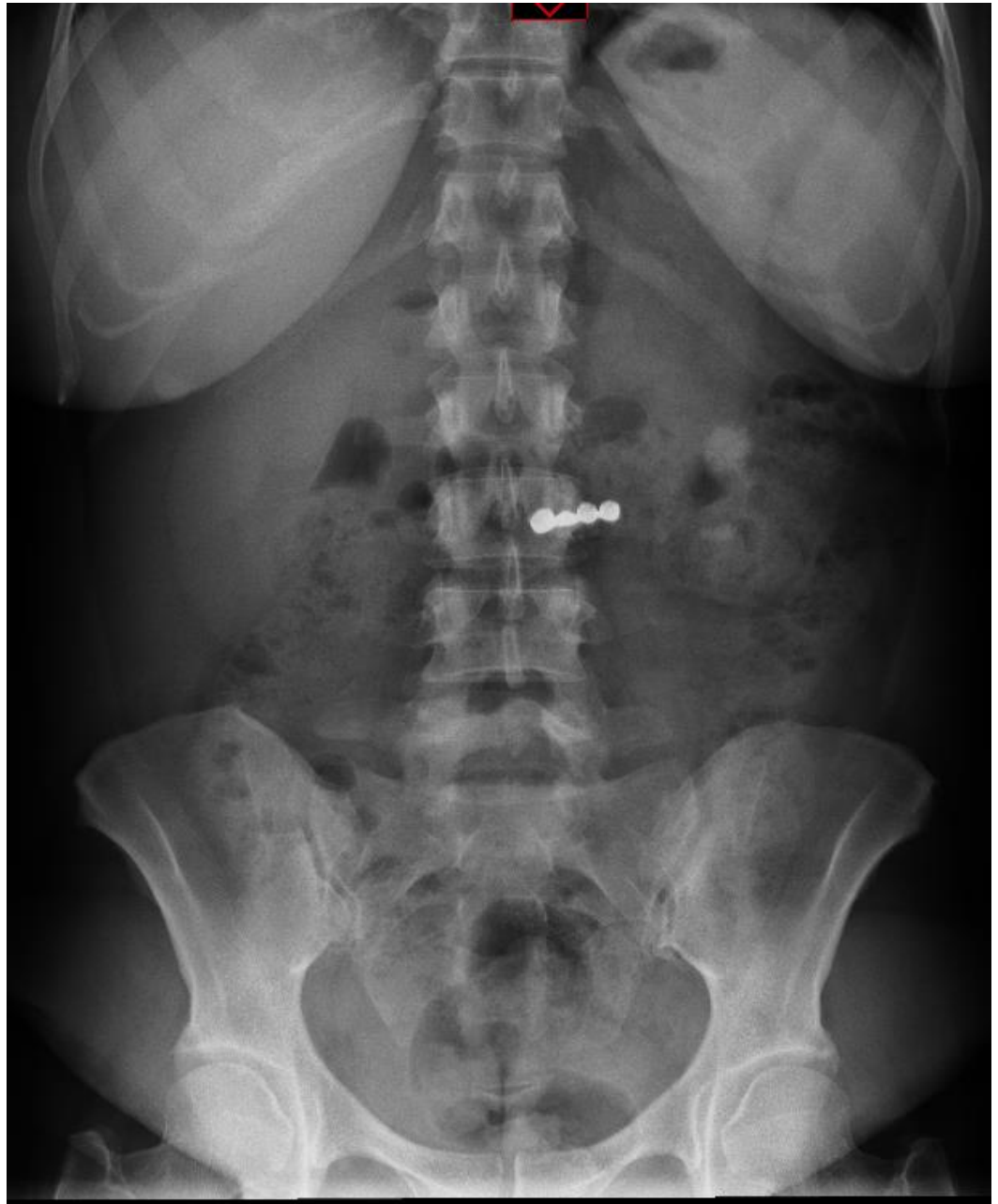
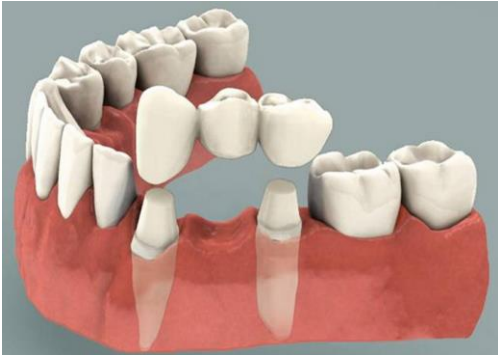
38 y.o women. Abdominal XR shows **retained gauze** from a hemorrhoidectomy. Notice the gauze have migrated to the descending colon. It was removed by colonoscopy.



51 y.o. man. Sagittal CT image shows colonic perforation and formation of a large abdominal wall abscess due to a **fish bone**.



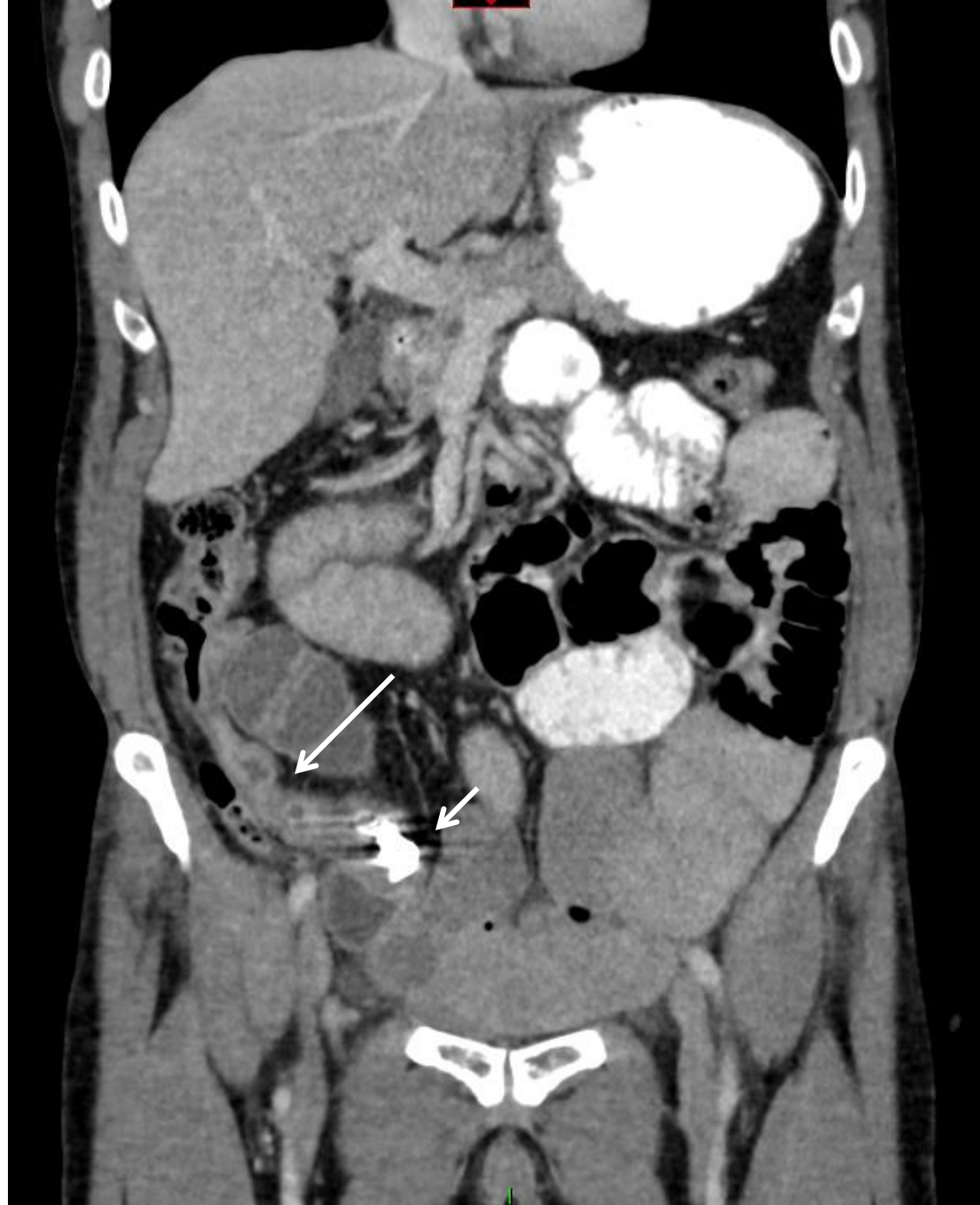
36 y.o. woman. X-ray showing a swallowed **dental bridge**. This was followed conservatively.



48 y.o. man. Swallowed **dental crown**, also followed conservatively.



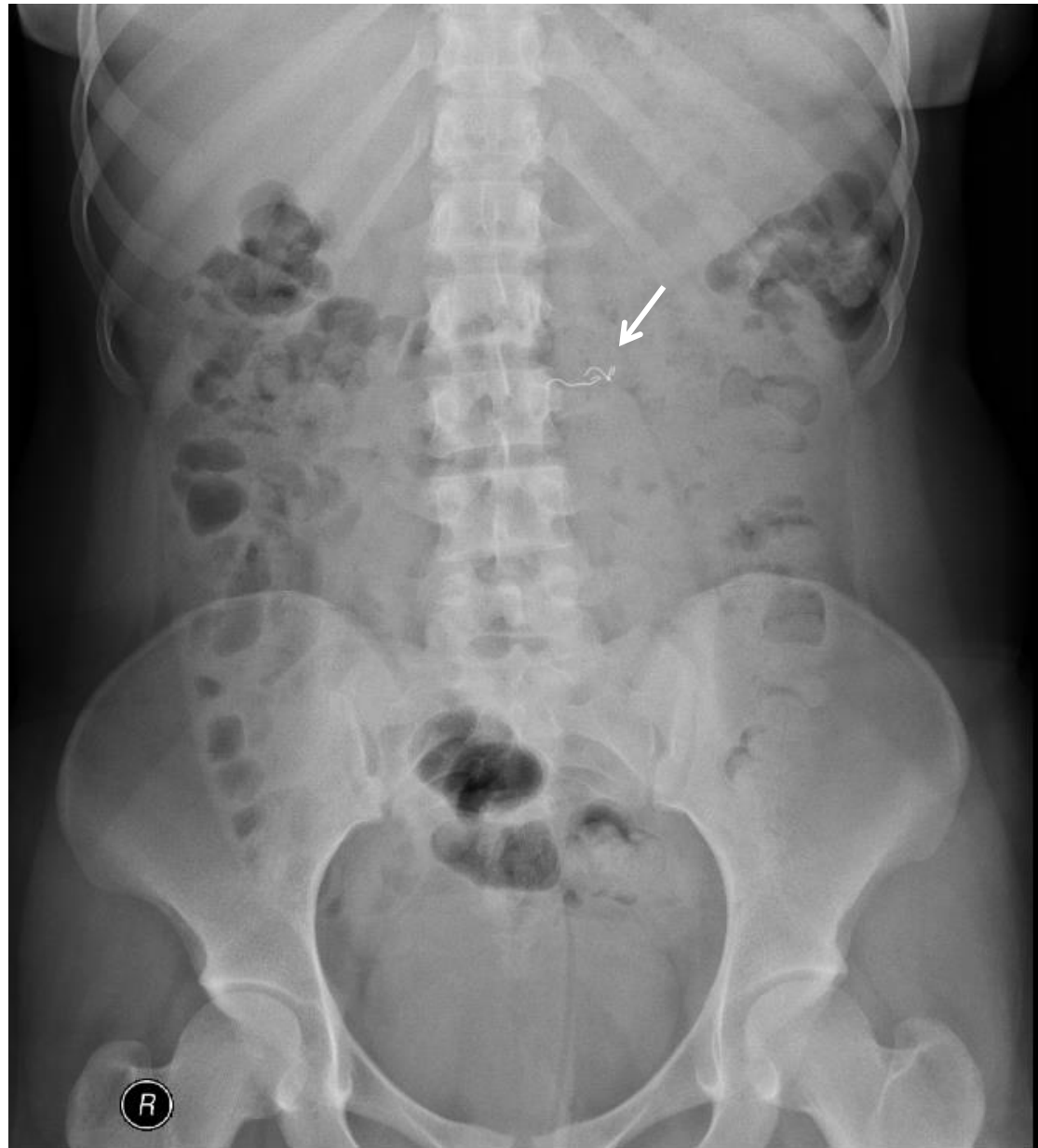
53 y.o. man with **Crohn's disease**.
Coronal CT image shows a **dental
bridge** (short arrow) causing
obstruction in a stenotic terminal
ileum (long arrow)



53 y.o. man with **Crohn's disease**.
X-ray shows the **dental bridge**



18 y.o. man with swallowed
dental brackets followed
conservatively.



47 y.o. man. X-ray shows an **Intra-rectal perfume bottle**. Object was removed in surgery.



19 y.o. woman with psychiatric disorder.
Intentional swallow of **glass shreds**. Objects
were followed conservatively.



Conclusion

- Having sound knowledge in the abilities of different imaging modalities in visualizing foreign bodies, as well as understanding how different foreign bodies present, both clinically and radiologically, is important when looking for foreign bodies or their complications