Gastric Trichobezoar
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Section: Abdominal imaging
Area of Interest: Gastrointestinal tract Stomach (incl. Oesophagus)
Procedure: Diagnostic procedure
Imaging Technique: CT
Special Focus: Foreign bodies Case Type: Clinical Cases
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Patient: 18 years, female

Clinical History:
18 year-old girl with background trichophagia referred to our surgical department with progressive epigastric pain and vomiting. Endoscopy showed large a stomach mass that could not be removed. Abdominal CT was performed, and the mass was eventually removed in an open laparotomy.

Imaging Findings:
Initial chest and abdominal radiographs were unremarkable. 72 hours later CT of the abdomen and pelvis with intravenous contrast demonstrated a large, nonenhancing, heterogeneous, gas containing mass in the stomach. This extended through the entire duodenum into the proximal jejenum compatible with a trichobezoar. Smaller accumulations of hair were also present more distally in the jejunum. Free air and free fluid in the peritoneal cavity confirmed intestinal perforation.

Discussion:
Bezoars are defined as hard indigestible masses found in the stomach or intestine. They can be comprised of different materials such as hair (trichobezoar), vegetable (phytobezoar), milk (lactobezoar) and semi-liquid masses of drugs (pharmacobezoar) [1-2].
Trichobezoar is strongly associated with a medical history of trichotillomania (TTM) of which 1 in 2000 children suffer with worldwide. 30% of those with TTM will eat the hair they pull out (trichophagia), 1% of which will go on to develop a trichobezoar. Patients may present with nausea and vomiting, fever and abdominal pain with associated mass. They may also present with alopecia or hair thinning. Trichobezoars can form as the swallowed hair escapes peristalsis and gets trapped in the gastric folds of the stomach’s mucosa. Progressive trichophagia and accumulation of the hair causes the bezoar to harden and can cause obstruction. Whilst they form in the stomach, they can often extend to the duodenum and small bowel, described previously as Rapunzel Syndrome [3].
Patients presenting with abdominal symptoms and history of TTM should be investigated for trichobezoar as a differential diagnosis which can be confirmed by CT or endoscopy. Ultrasound is often the first investigation and can show a heterogeneously hyperechoic mass with an associated acoustic shadow. Plain abdominal radiography may show areas of bowel gas paucity, a radio-opaque mass in the stomach or obstruction. Barium studies may help delineate a mottled filling defect in the stomach but the diagnosis is usually clinched by CT. Abdominal CT may show a luminal, non-enhancing, hypodense, heterogeneous mass which is separate from the gastric wall [4]. Small trichobezoars can be retrieved endoscopically, larger ones may require open laparotomy. Psychiatric support and follow up should also be offered to prevent a recurrence of the TTM behaviour that causes trichobezoar.
Differential Diagnosis List: Perforating gastric trichobezoar, Gastric phytobezoar, Gastric phytotrichobezoar, Gastric pharmacobezoar

Final Diagnosis: Perforating gastric trichobezoar

References:

Description: A trichobezoar in the stomach extending into the entire duodenum as well as proximal jejunum

Origin: Department of Radiology, Leighton Hospital
Description: Trichobezoar in the stomach and duodenum on a sagittal plane

Origin: Department of Radiology, Leighton Hospital
Description: Trichobezoar in the stomach, duodenum and proximal jejunum involvement

Origin: Department of Radiology, Leighton Hospital
Descriptive: Trichobezoar in the stomach

Origin: Department of Radiology, Leighton Hospital
**Description:** Trichobezoar in an area extending from the middle body to the antrum

**Origin:**
Department of Radiology, Leighton Hospital