

Gastrointestinal Tract Perforation by Ingested Foreign Body- Value of CT Diagnosis

PT121-GI

Chun-Lin Huang^{1,2} I-Li Lin¹ Wu-Ching Shen²

¹Ditmanson Medical Foundation Chiayi Christian Hospital, Taiwan; ²China Medical University Hospital, Taiwan

BACKGROUND AND AIMS: Most ingested foreign body (FB) passed through the gastrointestinal (GI) tract without complication. Due to relative small size and low density of ingested foreign body, patients unawareness of ever ingesting foreign body, and non-specific clinical presentation, correct diagnosis of ingested foreign body with GI tract perforation could be difficult preoperatively. CT scan had a great value in the correct diagnosis of ingested FB with GI tract perforation. Familiar with the different CT pattern and findings is important to the clinician and radiologist.

METHODS: From 2001 to 2012, 31 cases of gastrointestinal tract perforation caused by ingested foreign body were diagnosed in our hospital. The imaging findings including plain radiograph and CT scan were reviewed and correlated with the surgical findings.

RESULTS: The ingested foreign bodies included 23 fish bones, 4 chicken bones and 4 toothpicks. All had the same character of thin, long and sharp end in shape. The ingested FB could be seen in plain radiograph in just two cases. Correct diagnosis was made by CT scan in 25 patients preoperatively. About the relationship between the ingested FB and perforated GI tract, five patterns could be noted. Free air in the peritoneal cavity is the direct evidence of hollow organ perforation, but the findings could be detected in only 12 patients. The amount of free air is small and mainly distributed near FB site. Large amount of free air in peritoneal cavity was not found in our cases. The other associated CT findings in GI tract perforation including ascites, dirty peritoneal fat plane, bowel wall thickening, bowel loop dilatation and abscess formation would be discussed. Focal peritonitis was often the main CT findings, and generalized peritonitis was observed in only 4 patients.

CONCLUSION: GI tract perforation by ingested FB is rare. The ingested FB almost could not be identified in the plain radiograph and focal peritonitis was often the non-specific clinical presentation. CT scan is valuable in the detection of ingested FB and its related complication. Familiar with the different CT pattern and findings could help us to make the correct diagnosis preoperatively.