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SP 3. FREE AIR, UP THERE? TENSION PNEUMOTHORAX FROM GASTRIC ULCER PERFORATION

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Background: Introduction of proton pump inhibitors and histamine blockers has significantly decreased, though not eradicated, peptic ulcer disease, and especially perforation. Rarer still is ulcer perforation within a hiatal hernia. We present a spectacular case of a patient who presented with tension pneumothorax, ultimately found to be secondary to gastric ulcer perforation.

Methods: A seventy-nine-year-old woman presented to a rural hospital with syncope and fatigue, and was initially hypotensive, tachypneic, and hypoxic. Chest x-ray demonstrated a left-sided tension pneumothorax with mediastinal shift and a large left-sided pleural effusion. Chest tube was placed, draining air and malodorous turbid fluid, after which her vital signs improved. Her symptoms were thought to be due to a significant pneumonia, and she was transferred to a tertiary referral center to the medical intensive care unit. A CT chest/abdomen/pelvis was obtained to rule out carcinoma, which demonstrated a hiatal hernia and perforation of the intrathoracic stomach. It was discovered she had significant chronic back pain and daily ibuprofen use for multiple years.

Results: Exploratory laparotomy was performed. Two-thirds of the stomach was herniated into the chest. A large defect was found in the pleura, with the stomach densely adherent to it. The stomach was only able to be partially reduced into the abdomen due to significant inflammation. A 9 x 5 cm anterior gastric perforation at the greater curvature was noted. Multiple clean-based ulcers consistent with chronic ibuprofen use were noted. The gastric perforation margins were resected, and the defect was closed primarily in two layers with an omental patch. A Witzel jejunostomy tube was placed. The pleural defect could not be closed. Imaging on postoperative day 7 showed no signs of leak, and she was started on a diet. Chest tube was removed. A loculated left chest abscess recurred requiring drainage, but she was successfully discharged on postoperative day 24 to a nursing facility. By three months postoperatively, she had returned home and most importantly ceased her ibuprofen use.

Conclusion: Gastric ulcer perforations remain a significant source of morbidity, and when associated with a hiatal hernia can cause diagnostic mystery and unique surgical considerations.