A Case of Gastric Wall Emphysema after Endoscopic Submucosal Gastric Glomus Tumor Biopsy

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Introduction: Gastric wall emphysema is known to be associated with a variety of clinical conditions in which gas enters the stomach wall. Pneumoperitoneum is usually the result of hollow viscous perforation. However, that can arise without perforation, and gastric emphysema is one of the possible causes of it. Gastric emphysema related to the endoscopic biopsy of a submucosal tumor has not been reported before. We describe here a case of gastric emphysema associated with the submucosal endoscopic biopsy of a gastric glomus tumor.

Case report: A 57-year-old woman presented with an incidental finding of a submucosal tumor in the stomach. Upper gastrointestinal endoscopy revealed a 3cm sized, well circumscribed, submucosal mass at the anterior wall of the antrum. The EUS findings were not pathognomonic for any kind of submucosal tumor. Thus, a mucosal incision, followed by conventional biopsy, was attempted. Hypertonic saline was injected beneath the submucosal layer, and an incision into the mucosa, using a needle knife, was performed. Using conventional biopsy forceps, a biopsy of the tumor was performed. Two hours later, a chest PA revealed free air, an abdominal CT scan revealed a large amount of intramural air in the stomach wall and pneumoperitoneum. The patient was subjected to a laparoscopy assisted wedge resection of the antral wall of the stomach. The histopathologic findings of the lesion were characteristic of the glomus tumor of the antrum.

Discussion: Gastric emphysema can be the result of three categorical etiologies: These are traumatic gastric emphysema, obstructive gastric emphysema and pulmonary gastric emphysema. Previous reports indicates that the possible mechanism of traumatic gastric emphysema is mucosal damage and high intra-gastric air pressure. One should take all reasonable precautions to prevent gastric emphysema: by not incising widely and by not over-distending the stomach.