Cervico facial pharyngeal emphysema during endoscopic retrograde cholangio pancreatography

Sir,

Perforation of viscus and subsequent pneumomediastinum, pneumothorax, gaseous deposition in subcutaneous and deeper fascial layers are well recognised complications of endoscopic retrograde cholangio pancreatography (ERCP). This report highlights a rare case of cervico facial pharyngeal emphysema during ERCP posing a potential airway obstruction.

A 60-year-old woman was scheduled for ERCP to investigate intra and extrahepatic biliary dilation. After initial evaluation monitored anesthesia care was planned. After attaching routine monitors, patient was placed in the prone position. Oxygen via nasal cannula were applied. The patient was sedated with bolus of 70 mg propofol, 20 mg of ketamine and an infusion of propofol 1% 15-20 ml/h. Once the patient reached a deep level of sedation endoscope was advanced. Vital signs remained stable and the patient maintained an oxygen saturation of 97-100%. After few minutes, the patient desaturated to 85%. She was thought to be obstructing her airway secondary to the sedation but found her to have excessive subcutaneous crepitations on her dorsal chest wall. The procedure was aborted and the patient was placed supine and subcutaneous emphysema extending to her neck, face, trunk and limbs was observed. On laryngoscopy, vocal cords were barely visualised due to pharyngeal emphysema posing a potential airway obstruction and the patient was immediately intubated with 7.0 endotraheal tube and the saturation improved to 95%. A chest X-ray showed extensive subcutaneous emphysema of chest wall and pneumomediastinum. The patient was transferred to ICU for further management. After initial stabilisation, computed tomography of the chest and abdomen were performed which showed extensive mediastinal, intraperitoneal and retroperitoneal free air. The patient was brought to the operating room for exploratory laparotomy. She was found to have multiple diverticula in the duodenum and jejunum. There was blowout perforation of a diverticulum in the second portion of her duodenum and bile in the peritoneal cavity. She had a resection and ‘over sewing’ of the duodenal diverticulum. She was transferred to the surgical Intensive Care Unit postoperatively. Her postoperative course was complicated by hemodynamic instability and developed fatal multi organ failure.

Perforation during ERCP is a well recognized complication (<1%). There are definitive risk factors like anatomical aberrations, strictures, sphincterotomy, Intramural injection of contrast, difficult ERCP which requires extra vigilance. These perforations are usually diagnosed during ERCP by extravasation of contrast material and retroperitoneal air, clinical signs (abdominal/flank pain or discomfort, peritonitis, fever, tachycardia, leucocytosis, hyperamylasemia and subcutaneous emphysema) and imaging studies.

The treatment of perforation depends on the clinical state of the patient and the type of perforation.

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This case report highlights that gastrointestinal endoscopic procedures are not free from major complications and requires...
eternal vigilance and definitive control of airway in prone position.

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