Subcutaneous Emphysema, Pneumomediastinum and Pneumoperitoneum after ERCP: Management of an Unusual Case

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Abstract

Background: Endoscopic retrograde cholangiopancreatography (ERCP) is a commonly used procedure in the diagnosis and treatment of biliary tract and pancreatic diseases. This procedure is safe but may cause life-threatening complications such as pancreatitis, bleeding and perforation. Perforation is the most fearful one among these complications. In cases of perforation, rapid diagnosis and treatment is lifesaving.

Case presentation: We report the case a 61-year-old female patient who developed pneumoperitoneum, pneumomediastinum and subcutaneous emphysema after ERCP. She was admitted to the emergency department due to neck swelling one hour after ERCP procedure. The patient was further evaluated on suspicion of perforation in emergency department. Computed tomography (CT) scans demonstrated free air in the peritoneal cavity, retroperitoneal region and mediastinum and neck region. We thought that there might be air leakage due to excessive insufflation and facilitation of air leakage via duodenal diverticulum in our case. Early surgery was not planned and the patient was followed up nonoperatively. On the fifth day of the follow-up period, the patient was discharged with stable vital signs.

Conclusion: It should be kept in mind that there may be microperforations and duodenal air leaks that do not require surgery after ERCP. The clinical or radiographic amount of air does not always correlates with the size of the perforation or severity of the complication, but rather pertains
to the degree of manipulation after the perforation.

**Key words:** Cholangiopancreatography, endoscopic retrograde; subcutaneous emphysema; pneumomediastinum, pneumoperitoneum.