

Classification and Management of Subcutaneous Emphysema: a 10-Year Experience

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Abstract

Subcutaneous emphysema (SE) is a condition often causing minimal symptoms, but sometimes it can be severe and even life-threatening. This study is the first great survey about SE. The aim of this study is to classify and evaluate the etiology, signs, symptoms, and management of SE. This retrospective study was performed by reviewing patients who had been diagnosed as having SE in Rasht, between January 2001 and January 2011. We classified the severity of SE in five grades including the (1) base of the neck, (2) all of the neck area, (3) subpectoralis major area, (4) chest wall and all of the neck area, and (5) chest wall, neck, orbit, scalp, abdominal wall, upper limbs, and scrotum. We excluded all patients in grades 1 and 2, because the symptoms and signs were not significant. Statistical analysis was carried out with SPSS 18. We collected 35 cases of SE with the mean age of 53 ± 14.83 (71 % men). The most common cause of SE was pneumothorax with background of COPD and surgery in grade 5, trauma due to rib fracture in grade 4, and iatrogenicity in grade 3. We performed two bilateral 2-cm infraclavicular incisions. In our patients with infraclavicular incisions, expansion of the lung was better, and the patients' appearance improved. Infraclavicular incisions as a simple method for the management of SE can decrease the severity of SE with no cosmetic problem.