Iatrogenic Pneumomediastinum and Facial Emphysema After Surgical Tooth Extraction

Dimitrios Pousios, Nikolaos Panagiotopoulos, Nikolaos Sioutis, Anastasios Piyis and Stavros Gourgiotis

Ann Thorac Surg 2010;89:640
DOI: 10.1016/j.athoracsur.2009.05.008

Iatrogenic Pneumomediastinum and Facial Emphysema After Surgical Tooth Extraction

Dimitrios Pousios, MD, Nikolaos Panagiotopoulos, MD, Nikolaos Sioutis, MD, Anastasios Piyis, MD, and Stavros Gourgiotis, MD, PhD

Thoracic Surgery Department and Second Surgical Department, 401 General Army Hospital of Athens, Athens, Greece

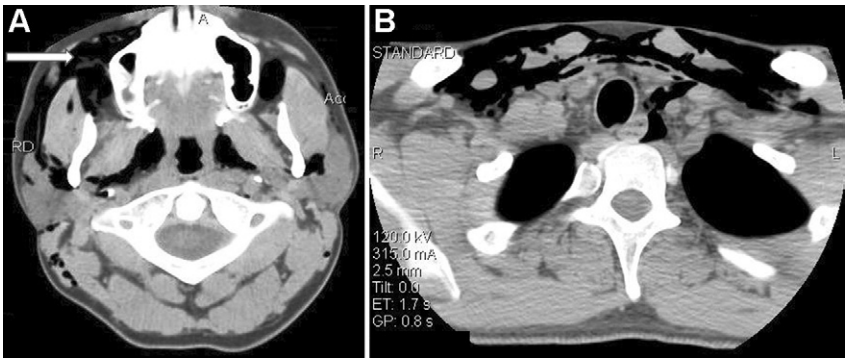

Fig 1.

A 29-year-old soldier underwent conventional surgical extraction of his wisdom tooth (no. 48) from the mandible. During the procedure, compressed air had been used to dry the root canal. Two hours later he complained of mild dyspnea and substernal chest pain. Physical examination revealed swelling of the right hemifacial, neck, and anterior thoracic (presternal) region. There were no signs of inflammation or fluid collection. Routine hematologic and blood biochemistry results were normal. From his medical history, he was allergic to aspirin. A computed tomographic scan of the thoracocervicofacial area demonstrated subcutaneous emphysema and air in the deeper regions from the mandibular area to mediastinum (Fig 1A, *arrow;* and Fig 1B). The patient experienced an uneventful recovery and was discharged after a 5-day treatment with oral anti-inflammatory substances without symptoms.

Address correspondence to Dr Gourgiotis, 41 Zakinthinou St, Papagou, Athens, 15669, Greece; e-mail: drsgourgiotis@tiscali.co.uk.

Pneumomediastinum is a clinical condition in which gas exists in the interstices of the mediastinum. Gas can be introduced into the soft tissue spaces through the dento-alveolar membrane or the root canal [1]. Afterward, it reaches the mediastinum by dissection through the visceral space. Not only tooth extraction, but also trauma, dental treatments, infections, and maxillofacial operations, when hydrogen peroxide solutions are used, may be causes of emphysema [1]. The extension of air into the retropharyngeal, mediastinal, and peritoneal spaces can cause secondary infections and even death from sepsis or air embolism [2].

References

1. Nahlieli O, Neder A. Iatrogenic pneumomediastinum after endodontic therapy. Oral Surg Oral Med Oral Pathol 1991;71:618–9.
2. Battrum DE, Gutmann JL. Implications, prevention and management of subcutaneous emphysema during endodontic treatment. Endod Dent Traumatol 1995;11:109–14.

Ann Thorac Surg 2010;89:640 • 0003-4975/10/$36.00
doi:10.1016/j.athoracsur.2009.05.008

Iatrogenic Pneumomediastinum and Facial Emphysema After Surgical Tooth Extraction

Dimitrios Pousios, Nikolaos Panagiotopoulos, Nikolaos Sioutis, Anastasios Piyis and Stavros Gourgiotis

Ann Thorac Surg 2010;89:640
DOI: 10.1016/j.athoracsur.2009.05.008