

# SPONTANEOUS SUBCUTANEOUS EMPHYSEMA OF NECK A CASE REPORT

Venkatesha.B.K<sup>1</sup>, Kori Priya Rani<sup>2</sup>, Shruthi.M.S<sup>3</sup>

<sup>1</sup>Associate professor, <sup>2</sup>Post graduate student, <sup>3</sup>Post graduate student, Department of Otorhinolaryngology  
S.S. Institute of medical sciences and research centre, Davangere, Karnataka, India.

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## Abstract:

**Background:** Subcutaneous emphysema in the head and neck is a rare condition, normally caused by major underlying injury to the airway or gastrointestinal tract. We report a non-traumatic occurrence of spontaneous cervical subcutaneous emphysema in a 38 yrs old male patient who presented with swelling in front of neck, vomiting and difficulty in swallowing. The patient made an uneventful recovery, being managed conservatively and did not require airway support.

**Key words:** Spontaneous subcutaneous emphysema, Non-traumatic emphysema, Dysphagia.

## Introduction

Spontaneous subcutaneous emphysema is defined as subcutaneous emphysema without an obvious cause, but is unusual and very rare. Subcutaneous emphysema may develop from gas-forming infections, trauma or a break in the skin, airway or gastrointestinal tract. Tracheal rupture is a rare, potentially life-threatening condition that is iatrogenic or traumatic in the vast majority of cases, but may be spontaneous in a few cases.

## Case report

A 38yrs old male patient presented to the casualty with 8 hours history of sudden onset of swelling in front of neck associated with difficulty in swallowing. Difficulty in swallowing was for both solids and liquids. He gave a history of one episode of vomiting with vomitus consisting of food particles following which he did retching. Immediately after this he developed swelling in front of neck and dysphagia.

Examination of neck showed subcutaneous emphysema extending from submental region to suprasternal notch and laterally over sternocleidomastoid muscle on either side. On oral examination, no abnormality was found. Nasopharyngolaryngoscopy was performed and lingual surface of epiglottis on right side was found oedematous. X-ray neck lateral view revealed subcutaneous emphysema over anterior part of neck (Fig.1). chest x ray was normal.

Patient was admitted in male emergency ward and monitored. He was kept nil per oral and fluids, IV antibiotics and IV steroids were started. Blood investigation revealed haemoglobin -5.9 with

peripheral smear showing microcytic hypochromic picture. Blood transfusion was done and patient was evaluated for anemia. He gave history of haemorrhoids since 1 year. On day 3, X-ray neck lateral view was repeated and emphysema was found to be reduced (Fig.2). Patient improved symptomatically as well. Patient was discharged 4 days following the admission.



Fig 1. X ray neck antero-posterior and lateral view



Fig.2. X ray neck lateral view on second day of admission.  
Day of admission.

## Venkatesha.B.K

Associate professor,  
Department of Otorhinolaryngology  
S.S. Institute of medical sciences &  
research centre, Davangere,  
Karnataka, India.

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## DISCUSSION

Subcutaneous emphysema is a rare condition that presents as a smooth bulging of the skin with a characteristic palpable crepitation. It can occur anywhere in the body but is most common in the head and neck due to the proximity of the airway. In the head and neck, the patient may also have neck and chest pain, dysphagia, dysphonia, wheezing and dyspnoea. Subcutaneous emphysema is not inherently life threatening and the air will be resorbed over time but it can be uncomfortable for the patient. The underlying cause, however, is a concern and may require both investigation and treatment.

Most cases were found to be the result of increased intrathoracic pressure and were seen in postoperative patients with positive pressure ventilation, following SCUBA diving, during labour, following Valsalva-type maneuver, following excessive phonation, following excessive blowing and following lung function tests. Soft tissue neck and chest radiographs are useful for initial diagnosis, but computed tomography is excellent to disclose the extension of air and helps to reveal hidden pathologic conditions. The lateral view of soft tissue radiographs of neck is more sensitive and can visualize air in the retrosternal space.

## CONCLUSION

Spontaneous subcutaneous emphysema is a rare condition. A high degree of clinical suspicion is required and initial soft tissue neck and chest radiographs along with nasopharyngolaryngoscopy will help clinch the diagnosis. Treatment is mainly supportive with bed rest, IV fluids, antibiotics and steroids. Our patient presents an etiological puzzle as there was no significant history suggestive of causing subcutaneous emphysema other than mild retching which is insufficient to cause such condition.

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