

Diffuse Aerodermectasia Floating Body Sign

Michael Plaza,¹ Justin La Plante²

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INTRODUCTION

Presence of subcutaneous air in the scrotum is a rare condition and only a few cases have been reported in the literature.⁽¹⁾ Air in the scrotum secondary to trauma is even far less common and minimal discussion exists on this topic. We present a case of traumatic pneumoscrotum which was made unique by the fact that the amount of air introduced into the scrotum was so extensive that it was dissected through the fat planes superiorly to the level of the scalp resulting in pneumoretroperitoneum and pneumomediastinum along the way. We discuss the presentation, clinical course, and treatment strategy of the patient.

CASE REPORT

A 55-year-old man with the past medical history of schizophrenia was admitted for diffuse subcutaneous emphysema secondary to self-inflicted scrotal barotrauma. The patient inserted the tube into the scrotum and introduced air until he began to feel air tracking up to his neck from the suprapubic region. On physical examination, the patient had palpable crepitus of the abdomen, the chest, the neck, and the extremities. Genitourinary examination demonstrated approximately 2 inches of the tube inserted into the scrotum with no bleeding around the site of

insertion and no significant scrotal swelling. In addition, the patient had a nut and bolt through and through the urethra just below the coronal sulcus.

Computed tomography scan revealed diffuse subcutaneous air that extended from the patient's proximal legs to his scalp, as well as pneumomediastinum and pneumoretroperitoneum. Figure 1 demonstrates the contiguous



Figure 1. Sagittal computed tomography scan of the abdomen and the pelvis in the lung window settings demonstrates subcutaneous air seen extending the length of the body. Green arrow: pneumomediastinum; Red arrow: Subcutaneous emphysema

¹Jackson Memorial Hospital,
University of Miami, Miami, USA
²University of Utah Health Sciences
Center, Salt Lake City, UT, USA

Corresponding Author:
Michael Plaza, MD
Jackson Memorial Hospital,
University of Miami, 1611 NW
12th Ave., West Wing No.279,
Miami, FL 33136, USA
Tel: +1 704 779 5604
E-mail: mjplaza@yahoo.com

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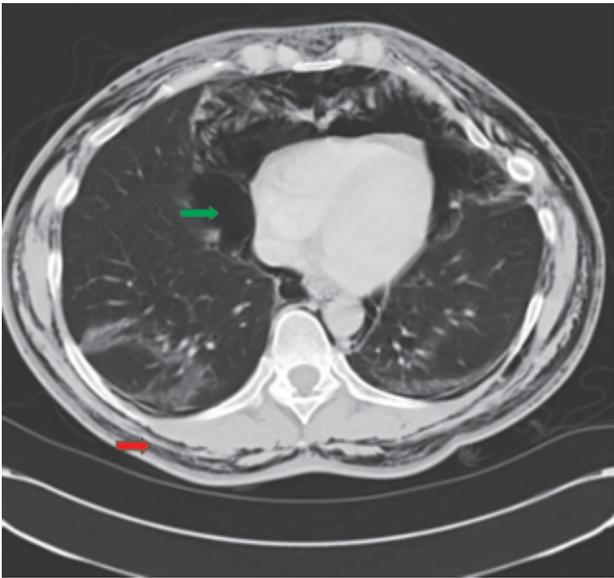


Figure 2. Axial computed tomography scan at the level of the heart in the lung window settings demonstrates subcutaneous emphysema encircling the thorax and well as a significant degree of pneumomediastinum. Green arrow: pneumomediastinum; Red arrow: Subcutaneous emphysema

nature of the subcutaneous air as it extends the length of the body in a circumferential way. Figure 2 demonstrates pneumomediastinum and represents the floating body sign, which refers to the radiographic appearance of subcutaneous air encircling the torso or any extremity.

The nut and bolt were removed without difficulty and the tube was removed from the scrotum. The patient had no difficulty or pain while urinating. The patient was observed overnight for possible respiratory compromise and was discharged the next day without intervention.

DISCUSSION

Our case illustrates the degree to which air may spread through out the soft tissues after

initial introduction of air to the scrotum. For the development of diffuse aerodermection from an initial site of pneumoscrotum, a combination of two mechanisms of spread is suspected. Air passed through the inguinal canal and into the paranephric space, then superiorly into the mediastinum, resulting in the visualized pneumoretroperitoneum and pneumomediastinum. The second mechanism is that air from the scrotum traversed through Scarpa's fascia to extend to the rest of the body's subcutaneous soft tissues.⁽²⁾

The clinical presentation of traumatic pneumoscrotum is typically impressive to the treating physician; however, it is not emergent and care is supportive. The patient should be observed for more serious complications such as pneumothorax or air within the neck subcutaneous tissues expanding and leading to suffocation. The differential of pneumoscrotum includes iatrogenic procedures such as endoscopy, infection as in the case of Fournier's gangrene, scrotal trauma, pneumothorax, and visceral perforation.⁽¹⁻³⁾

CONFLICT OF INTEREST

None declared.

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