Letter to the Editor in Response to "Caring for Patients with Spinal Cord Injuries"

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Dear Editors:

I followed with interest a recent case reported by Juan J. Olivero, MD (Caring for Patients with Spinal Cord Injuries. *Methodist DeBakey Cardiovasc J*. 2020;16(3):250-1). The paper reports a 32-year-old man who became a quadriplegic because of a gunshot wound to the cervical spine. He developed a massive atelectasis of the left lung, which resolved after spontaneously coughing a large organized bronchial cast. The man is described as having a tracheostomy (although this is not visible in the chest radiograph disclosed, which indeed shows bullet fragments in the cervical spine and a large atelectasis of the left lung). The case highlights the teaching points to remember.

Among those clinical teaching points for residents, I should remark that in order to be able to spontaneously expectorate such a large bronchial cast, the patient was required to perform a strong cough effort. This man was already at a disadvantage in that regard because if he indeed had a tracheostomy, then he was unable to generate cough by effectively increasing intrathoracic pressure before coughing (impaired by the open tracheal tube, which will impede his ability to elevate intrathoracic pressure). Therefore, he depended solely on his ability to perform a sudden and strong diaphragmatic contraction, which is only possible if his diaphragmatic function was intact. This finding points to the fact that his cervical lesion must have been low (C6, C7) as he needed intact C3, C4, and C5 to be able to expectorate the cast:

"…C 3, 4, 5 keep the diaphragm alive…."

Thank you,

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REFERENCES

1. Olivero JJ. Caring for patients with Spinal Cord Injuries. Methodist DeBakey Cardiovasc J. 2020;16(3):250-1.

2. Berlowitz DJ, Wadsworth B, Ross J. Respiratory problems and management in people with spinal cord injury. Breathe. 2016;12:328-340.