Senator Rand Paul With Significant Injuries After Assault

By Jamie Wells, M.D. — November 9, 2017

Senator Rand Paul was recently assaulted and sustained multiple rib fractures. Initially revealed as minor injuries, with the passage of time along with the natural evolution of such conditions, it is clear by the following tweet posted by Paul that he is experiencing significant effects of the incident:

Senator Rand Paul ✅ @RandPaul · 18h

I appreciate all of the support from everyone. A medical update: final report indicates six broken ribs & new X-ray shows a pleural effusion

With the number of rib fractures elucidated now as six, up from five, and the development of a pleural effusion, the clinical picture is very much a dynamic one. Such is to be expected with these types of traumas. By all accounts, Paul is recuperating at home. Apparently, he is closely monitored but not at a point of requiring hospitalization. Hospitalization can become necessary should his effusion become larger and symptomatic. Those cases warrant more aggressive intervention (to drain the fluid) like chest tube placement where a drain is inserted into the chest cavity through an incision made between the ribs.
Earlier this week, in Sen. Rand Paul Was Assaulted, Sustains Rib Fractures [2], I address the consequences of rib fractures, in general, and the wide array of problems they, the pain endured from them and chest trauma can cause. It was published that the Senator “was reportedly tackled [3] while he was mowing the grass at his home in Bowling Green, Ky.” The lawyer for his alleged assailant is claiming a neighborly dispute triggered the event, while innumerable members of the community are publicly denouncing existence of any such animosity. Sen. Paul has re-tweeted articles supporting there was no ongoing turmoil. With further disclosure, the entire picture should get clearer.

The latest statement from the Senator’s Team:

**Statement from Doug Stafford, Senior Advisor to Sen. Paul**

“Last week Senator Paul was vigorously assaulted by someone in his neighborhood. This is a serious criminal matter involving serious injury, and is being handled by local and federal authorities. As to reports of a longstanding dispute with the attacker, the Pauls have had no conversations with him in many years. The first "conversation" with the attacker came after Sen. Paul’s ribs were broken. This was not a fight, it was a blindside, violent attack by a disturbed person. Anyone claiming otherwise is simply uninformed or seeking media attention."

What is a pleural effusion?

The lungs occupy either side of the chest and are surrounded by a thin tissue membrane called the pleura. You can think of the lungs and pleura as a bag of air, blown up inside a second bag, the lungs are blown up to the point that the pleura is a collapsed space, physicians call it a virtual space. The pleura helps the lungs move smoothly up and down and facilitates breathing.

A pleural effusion is when there is fluid in the pleural space. There are different types of them. Some are caused by advancing heart or liver failure, even malignancy. In the case of post-trauma like the Senator reports, six ribs are more than sufficient to yield such escalating medical problems and no real surprise given the obvious extent of his injuries.

When fluid, blood, air or debris enter this space, they can get trapped, create an inflammatory reaction that in turn results in a build-up of fluid. Bacterial pneumonia can also prompt such accumulation. As the pleural space expands, it constricts the lungs while further irritating the tissue. If the pleural space expands sufficiently the lungs and other contents of the chest, like our trachea (breathing pipe) or superior vena cava (the large vein that drains all of the blood of our arms and head into our heart) can collapse and be compromised.

If the amount of fluid is on the smaller side, then close observation is routine and the body’s
reabsorption of the material can occur naturally with time. If a person becomes increasingly symptomatic with shortness of breath, for instance, and the volume expands excessively, then the issue is more complicated involving more invasive procedures. Recurrence can also become a more chronic problem and the fluid itself can be a reservoir for infection.

The pleuritic pain caused by such traumas is quite problematic and is extensively discussed here [2]. It can prevent a person from fully expanding his lungs to take deep breaths and take in oxygen. With this limited ventilation, a person can become at risk for pneumonia which when bad enough can elicit an effusion. As addressed in the previous article [2] on this topic, the constellation of symptoms and problems arising from such an attack can pose an unforgiving cascade of untoward effects. The trajectory of difficulties is dependent on the mechanism and extent of injury as well as the underlying clinical status of the individual and those complicating factors. Recovery can be a windy, protracted road.

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