**Case Report - A Case of Complicated Simple Pneumothorax**

Farah binti Mohd Faisal1, Johnny Ngu Tai Hock1, Mexmollen Marcus2

1Department of Emergency and Trauma,Queen Elizabeth Hospital II

2Faculty of Medical and Health Sciences, Universiti Malaysia Sabah

**Introduction**

Non-traumatic spontaneous pneumothorax is not uncommon emergency department. The latest guideline has recommended a more patient-centered approach for each cases.

**Case description**

A 39 years old female with a history of bronchial asthma and recently diagnosed dilated cardiomyopathy, with a left ventricular apical clot, was referred to ED with the complaint of sudden onset of breathlessness. The patient was tachypnoeic and able to speak in short sentences with an SpO2 of 91%. There was reduced air entry over left lung and generalized rhonchi over right lung. Her BMI was 31kg/m2. CXR showed a left sided massive pneumothorax. Her INR was 3.7 due to warfarin started 5 days ago. The need for pleural drainage was indicated, the potential risks and benefits of both needle thoracocentesis and chest tube were explained to patient Due to her high BMI and supratherapeutic INR, prothrombin complex concentrate (PCC) was administered prior to procedure. A Rocket® indwelling pleural catheter (IPC™) was inserted as the first choice for drainage. Repeated CXR on 3rd day showed full re-expansion of the left lung.

**Discussion**

Standard recommendation of relieving a massive pneumothorax is by chest tube insertion7. Due to her high BMI and hypocoagulability, we anticipated an increased risk of bleeding and potential procedural difficulties9 hence the decision to insert an small bore catheter was done. Numerous studies shown that small bore catheters associated with fewer complications in obese patients, with comparable efficacy, length of hospital stay and mortality rates to large bore tube. In order to balance the risk of anticoagulant reversal and thromboembolism in this case, an INR level of 1.4 - 2.0 would be reasonable pre-procedure.

**Conclusion**

The management of the pneumothorax needs to be individualised depending on the complexity of the case. In this case, we proposed an IPC insertion as a viable option of pleural drainage for a patient with high BMI and higher bleeding tendency to minimize possible complications.

**Keywords**

Spontaneous pneumothorax, indwelling pleural cathether (IPC), anticoagulation management

Details:

1. **Word count** (not including title, authors and affiliations)

325

1. **Conflict of Interest Statement**

The authors declare that they have no conflicts of interest regarding the publication of this article.This statement makes it clear that the authors do not have any financial, personal, or professional interests that could have influenced the work presented in the article.