

14-French Pigtail Catheters for Traumatic Hemothorax/ Hemopneumothorax: Size Does Not Matter

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To the Editors,

We read the article “A Prospective Study of 7-Year Experience Using Percutaneous 14-French Pigtail Catheters for Traumatic Hemothorax/Hemopneumothorax at a Level-1 Trauma Center: Size Still Does Not Matter” by Bauman et al. [1] with great interest. The study researched 496 trauma patients who required chest drainage for traumatic hemothorax (HTX) and hemopneumothorax (HPTX): 307 by chest tubes (CTs) and 189 by pigtail catheters (PCs). They discovered PCs to exhibit similar outcomes as CTs in terms of failure rate and tube insertion-related complications, and the initial drainage output from PCs was not inferior to that of CTs. In the end, they proposed that a multicenter study is desirable to make the results more generalizable. In our hospital, also a Level-I trauma center, we study patients with similar procedure. From 2009 to 2016, we inserted PCs in the delay (day 3 after trauma) HXT and HPTX of 80 patients, and the complication of infection was lower than 21 CTs patients with shorter length of hospital stay. PC was considered generally to have higher obstruction rate due to the smaller drain holes. However, most of patients having HXT or HPTX suffered from major thoracic injury. The patients may experience a period of trauma-induced coagulopathy [2], which reduce the formation of blood clot that occludes the tube. In addition, if the blood clot happens to form, the passing of blood clot through the large holes of CTs may cause tube obstruction, which is less likely to happen in

PCs. Furthermore, we consider that the purpose of the drain tube is to drain fluid accumulation in the thoracic cavity rather than the blood clot to stop bleeding. Therefore, when PCs fails to drain fluid out and tube becomes occluded, we can simply remove the tube. This might be the reason why PCs exhibit similar successful rate in terms of insertion compared to CTs.

During the intervention of these patients, initial thoracostomy with PCs or CTs still remained controversy. However, we introduce early VATS in the elderly patients without thoracostomy [3], which might be an alternate way to management these patients to reduce the complications. Nevertheless, these issues may still remain in postoperative drain tube selection to decide which one is better, PC or CT. Perhaps the selection will be more suitable with relative smaller caliber, but not smaller than 14 French.

References

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