

## Femoral Venting procedure by suction tip on patient with acute pulmonary embolism: a case report

<sup>1</sup>Syazwan M; <sup>1</sup>Kathlene T; <sup>1</sup>Tan HQ; <sup>1</sup>Iqbal H;

<sup>1</sup>Department Of Orthopaedic Hospital Sultan Haji Ahmad Shah, Temerloh, Pahang

### INTRODUCTION:

Venting is a surgical technique to drain the intramedullary content during femoral nailing by using a suction tip. It helps to drain intramedullary content outside without surrounding soft tissue contamination as well as minimize intramedullary pressure during femoral canal reaming and nail insertion. This method is simple, safe and affordable. The purpose of this study to present our experience of femoral venting for patient with close fracture midshaft femur with acute pulmonary embolism.

### REPORT:

Mr S is a 46-year-old man had alleged traffic road accident, sustained closed fracture midshaft of right femur and left 2<sup>nd</sup> metacarpal bone fracture. He initially treated with high tibial pin insertion. However, patient had episode of acute pulmonary embolism a few days after the trauma. As the consequences, the definitive fixation had been postponed. Intramedullary nail of right femur done 2 weeks after the event. Femoral venting procedure was done intraoperatively to minimize intramedullary pressure, hence reduce the risk of recurrence pulmonary embolism. Intra and post operatively is uneventful.

### DISCUSSION:

Intramedullary reaming may lead to increase intramedullary pressure. It is one of the risk factors causing embolic events and pulmonary complications after closed femoral nailing. There are reported techniques to minimal the potential risk. First method is by making a hole at the lateral cortex of the distal femoral canal. However, it causes contamination of the surrounding soft tissue by leakage of the medullary content. Another method is applying a

special reamer with irrigation and

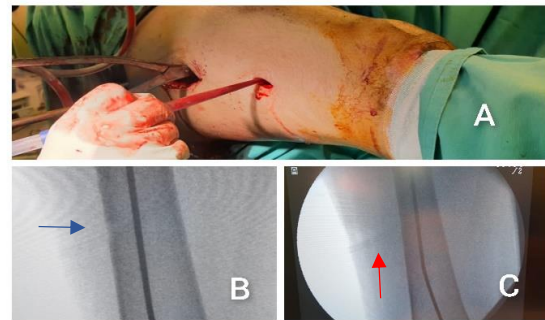


Figure 1

**A: Venting of femur using suction tip. B: Blue arrow shows a drilled hole over lateral cortex. C: Red arrow shows suction tip in the drilled hole act as a vent.**

suction equipment that can remove the medullary content and reduce the possibility of intravasation. Nevertheless, this special instrument is not available in our setting and costly. Thus, in this case, a drill hole is created at the lateral cortex of the distal femur by using a large size drill bit which has a diameter corresponds to a suction tip, usually 4.0 mm. The drill bit is then replaced with a suction tip in order to function as a vent. It is simple technique used to drain the intramedullary content outside in order to reduce intramedullary pressure during femoral nailing.

### CONCLUSION:

Femoral venting procedure by suction tip is a simple and affordable technique which can be applied to minimize intramedullary pressure, hence reduce the risk of recurrence pulmonary embolism.

### REFERENCES:

1. Theerawoot Tharmviboonsri et al., Siriraj Medical Journal; Venting in Closed Femoral Nailing: A Simple Technique Using a Frazier Suction Tip; 2014