

**FC-069****To vent or not to vent?**

I. Papanastassiou, A. Katzios, B. Prevezanos, T. Charitos, D. Ntallas, A. Andreakos, I. Patoulas, G. Papageorgiou

General Oncological Hospital Kifisias "Agioi Anargyroi", Athens, Greece

Introduction: Spanning the whole femur is considered by most authorities the gold standard in the treatment of metastatic lesions, in order to avoid further fractures and reoperations. However, the incidence of cardiopulmonary complications may be higher when longer implants are being utilized; Venting (drill hole in the distal cortex) has been suggested to reduce the intraosseous pressure and subsequent cardiopulmonary events. The purpose of this study is to investigate the correlation of venting and pulmonary events in patients treated with long endoprosthesis for peritrochanteric metastatic lesions.

Methods: We retrospectively analyzed 19 consecutive cancer patients operated during the last 3 years in a single institution; patients suffered from peritrochanteric fractures (or impending fractures) and were operated on either with long stemmed hemiarthroplasty, calcar replacing hemiarthroplasty or proximal femoral endoprosthesis (up to 7cm resection). In 5 patients venting was performed in the distal part of the prosthesis; pulmonary events were recorded and analyzed (including death, pulmonary embolization or desaturation of more than 10mm Hg in Po₂). Statistical analysis was done with SPSS version 19.0.

Results: In 2 patients data were missing and were considered non- evaluable. In the remaining patients 3 serious cardiopulmonary events were encountered: 2 pulmonary emboli (one fatal and the other requiring ICU admission) and one serious desaturation of 13mm Hg in Po₂, in the non- venting group. No patients with vent hole experienced pulmonary events (0% vs. 25%); however difference was not significant ($p > 0.5$, Chi -Square with Yate's Correction).

Conclusion: Venting may lessen the likelihood of serious cardiopulmonary events during insertion of long stemmed endoprosthesis, although our study was underpowered to support this notion. On the other hand surgery is prolonged and therefore each case should be individualized and tailored to the patient comorbidities, habitus and operative conditions.