HYBRID RADIOLOGIC-ENDOSCOPIC TREATMENT OF BRONCHOPLEURAL FISTULA AFTER LOBECTOMY FOR NSCLC: REPORT OF TWO CASES

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Objectives: To evaluate the efficacy of non surgical treatment of bronchopleural fistulas (BPF) after lobectomy for NSCLC stage I-II

Materials and Methods: Between october 2023 and may 2024 we treated with hybrid tecnique in our Institution two cases of documented BPF following lobectomy. Both patients were female, aged 72 and 60 years old respectively, operated for NSCLC. First patient underwent right lower lobectomy for stage I NSLC (pT1c N0 adenocarcinoma): pleural bleeding adhesions were faced during surgery. Second patient underwent left lower lobectomy for stage II NSLC (pT1c N1 adencoarcinoma); conversion from VATS to anterolateral thoracotomy was necessary because of fused fissure. Clinical and radiological evidence of BPF occured after the discharge in both cases (day 25 po).

Results: After drainage of pleural empyema and antibiotic therapy, treatment of BPF was defined. Under general anesthesia with double lumen intubation, occlusion of BPF was achieved by radiological occlusion of the bronchial branches previously identified by CT 3D mapping and confirmed by radioscopy and Cone-beam CT respectively. Fiberoptic bronchoscopy was performed during the procedure to ensure the correct placement. Above the BPF vascular coils (POD 8, Penumbra) and plug (Amplatzer vascular plug II 14 mm, Abbott) in the first case, microcoils (POD 5 and Packing Coil, Penumbra) in the second case, were realeased. Air leak cessation was almost immediate.

Conclusions: Use of radiological coils and plug can be extremely useful in the treatment of peripheral BPF with diameter ≤ 1cm, avoiding the necessity of surgery. Planning of tailored treatment is essential.