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Treatment of Persistent Air Leaks using Endobronchial Valves

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SI/CTR Abstract

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Treatment of Persistent Air Leaks using Endobronchial Valves

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Introduction: Persistent air leaks (PAL) are from bronchopleural fistula resulting from communication between the bronchial tree and pleural space. Endobronchial valves (EBVs) are unidirectional valves placed bronchoscopically preventing airflow to the diseased lung lobe. For non-operable patients with PALs, EBVs offer a potential non-invasive treatment approach to stop air leak and allow lung healing. The purpose of this study is to retrospectively analyze EBV placement to treat non-operable adult patients with PALs.

Methods: We retrospectively analyzed all adult patients that underwent EBV placement for PAL treatment at our institution from January 2016 to June 2019. All patients failed conservative therapy with chest tubes before EBV placement**.** Descriptive statistics were used to analyze leak etiology, number of valves placed, duration of placement, and PAL resolution.

Results: A total of 20 EBV procedures occurred in patients with a median age of 63 (range = 38–79). Air leaks were spontaneous in 13 patients and either due to post-surgical or iatrogenic causes in 7 patients. By last follow-up, 60% of patients still

retained all valves. Among patients that had valves removed, EBVs were in place for a median of 6 months (range = 2–21). 19 patients PALs resolved after EBV placement. **Discussion:** Our data supports previous reports of the feasibility of successfully treating PALs using EBVs. Although this report requires validation in a larger cohort, our data suggests that compassionate exemption EBV placement can be a possible treatment alternative to current standard of care for patients with PALs that are non-operable.