

中文題目：高氧氣流量下緊急支氣管鏡冷凍療法用於治療肺癌氣管內侵犯造成之
大量出血 - 案例報告及文獻回顧

英文題目：Emergent Bronchoscopic Cryotherapy in High Oxygen Demand Patient
for Endobronchial Invasion of Lung Cancer Related Massive Bleeding - A Case
Report and Review of Literature

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Introduction: Endobronchial cryotherapy is effective for managing hemoptysis in patients with inoperable endoluminal malignancies. Cryotherapy has no role in the management of massive hemoptysis because of its delayed effect in American College of Chest Physicians (ACCP) evidence-based clinical practice guidelines. However, in patients with high oxygen demand, bronchoscopic cryotherapy may be a safe method rather than electrocautery devices. We present a case of lung cancer associated with massive bleeding and high oxygen demand treated successfully by bronchoscopic cryotherapy and a brief summary of current available literatures.

Case presentation: A 67-year-old female with stage IVA lung cancer presented with blood-tinged sputum. On arrival, pale conjunctiva with tachycardia and low blood pressure was noticed. Laboratory data revealed anemia but normal coagulation profiles. During bronchoscopy, life-threatening massive bleeding and desaturation occurred suddenly. High oxygen supply was applied. Available electrocautery device was contraindicated due to high oxygen use and cryoablative therapy was performed immediately. Second look was done 1 week later and showed local necrosis without bleeding.

Discussion: Several bronchoscopic management for massive hemoptysis were proposed. Epinephrine spray and topical tamponade therapy were used for hemostasis without strong evidence. ACCP evidence-based clinical practice guidelines suggested that bronchoscopic cryotherapy has no role in the management of massive hemoptysis because of its delayed effect. However, cryotherapy is indeed a safe method with high successful rate in managing symptomatic endobronchial malignancy. Furthermore, cryotherapy is safe in high oxygen demanding patient due to decreased possibility of

endobronchial fire. Delayed hemorrhage is a known complication after cryotherapy but incidence of life-threatening bleeding is low.

According to our experience and current literature research, bronchoscopic cryotherapy is safe and efficient for patients with massive hemoptysis caused by endobronchial tumor, especially with high oxygen demand.