



**Service Priorities and Programmes**  
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**Submitting author:** Dr ON CHEUNG LEUNG

**Post title:** Resident, Tuen Mun Hospital, NTWC

**An audit: Management of massive haemoptysis by bronchial artery embolization in Tuen Mun hospital**

*Leung OC, Yeung TW, Tan CB*

*Department of radiology, Tuen Mun Hospital*

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**Introduction**

Massive hemoptysis is a life-threatening condition and carries a mortality rate greater than 50% in patients without adequate treatment. Bronchial artery embolization (BAE) is a minimally invasive approach that serves as an alternative to surgical resection in patients requiring aggressive management. The purpose of this audit is to evaluate the efficacy and safety of bronchial artery embolization in treating patients with massive haemoptysis in a regional hospital.

**Objectives**

To retrospectively review the safety, efficacy and complications of BAE in Tuen Mun Hospital and to compare the results with other institutions.

**Methodology**

From January, 2005 to January, 2013, all consecutive patients presented with massive haemoptysis in Tuen Mun Hospital who required bronchial angiography +/- embolization were retrospectively reviewed. The patients' demographics, BAE outcomes and presence of complications were evaluated. The data were compared with other similar studies to compare the safety and efficacy of BAE in this local centre.

**Result**

Bronchial angiograms were performed in 100 patients (79 male, 21 female) during the study period. No active bleeding source or hypertrophied artery could be identified in 13 patients. The remaining 87 patients received embolization accordingly. Angiographic success rate and immediate clinical control of haemoptysis were achieved in 100% patients. No patient required re-embolization within 24 hours. 78 patients (89.7%) did not develop recurrent hemoptysis after single embolization until last follow-up. Four patients (4.5%) developed repeated haemoptysis and required re-embolization within 1 month. Five patients (5.7%) required further embolization for recurrent haemoptysis beyond 1 month (ranged 3 months to 4 years). No major procedure-related complication was identified. Our results in technical success rate

and complication rate are comparable with other published studies. In conclusion, bronchial artery embolization is effective and safe in managing life-threatening massive hemoptysis and our results are up to standard and comparable with other institutions.