



THE CLINICAL QUESTION

What is the safety profile of endobronchial ultrasound guided transbronchial needle aspiration in patients taking dual anti-platelet agents?

TAKE HOME MESSAGE

In cases where dual anti-platelet medication cannot be held safely prior to bronchoscopy with EBUS-TBNA with a 21G or 22G needle, there does not appear to be adverse bleeding outcomes. However larger(19G) needles have not been studied.



BACKGROUND

Endobronchial ultrasound-guided transbronchial needle aspiration is the standard of care for minimally invasive staging of lung cancer and diagnosis of mediastinal lymphadenopathy and mediastinal lesions. However, a number of patients may have elevated cardiovascular risk necessitating the use of one or two antiplatelet agents. Withdrawing clopidogrel therapy in patients who have had recent coronary stent placement may increase the risk of stent thrombosis. Evidence suggests that clopidogrel carries a high bleeding risk for transbronchial lung biopsies. Earlier case series show that it may be safe to perform EBUS-TBNA in patients with concomitant dual antiplatelet therapy but further data is needed.



STUDY DESIGN

Type of trial: Prospective multi-centered cohort study

Follow up: Up to 2 weeks

Measured outcomes

Safety profile of EBUS-TBNA (descriptive)

Significant and non-significant bleeding events during EBUS-TBNA

Episodes of hemoptysis within 24h

Complete blood count values within 1-2 weeks

Intervention

Participants underwent bronchoscopy with EBUS-TBNA of mediastinal or hilar lymph nodes(BF-UC180F bronchoscope) 22G needles was used for 3 passes

If no complications, 21G was then used for additional 3 passes

Bleeding was considered significant if an interventional was required to achieve hemostasis(cold saline, topical sympathomimetic, balloon tamponade)

POPULATION

Inclusion criteria

Older than 18 years

Mediastinal and/or hilar lymphadenopathy taking combination clopidogrel/aspirin on day of bronchoscopy

Exclusion criteria:

clopidogrel held for 5-7 days

Baseline Characteristics (n = 40)

Mean age (y) 68.5

Men(%) 29 (75)

Indication for clopidogrel

Coronary artery disease with stent 32(77%)

Stroke/transient ischemic attack 8(23%)

Total lymph nodes sampled 92



BASELINE CHARACTERISTICS



Sample size: 40

Mean age(years): 68.5

Men(n[%]):29[75]

Indication for clopidogrel (n[%]):

Coronary artery disease with stent: 32[75]

CVA/TIA: 8[23]

OUTCOMES

Measured outcomes:

Primary outcomes: 40 cases of EBUS-TBNA with concomitant clopidogrel/ASA were documented.

A total of 92 lymph nodes were sampled. There

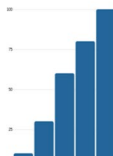
were no bleeding events during bronchoscopy.

There were no reported episodes of hemoptysis at

the 24h period and there were no changes to

complete blood count values at the 1 or 2 week

follow-up visit



COMMENTARY

This is the largest known cohort of patients undergoing EBUS-TBNA while taking dual anti-platelet therapy. Adding to the existing body of literature, this study reinforces the safety of EBUS-TBNA in patients taking clopidogrel.

As a cohort study there is no comparative arm including negative controls (no antiplatelet) or alternate coagulopathies(elevated INR, direct anticoagulants, Heparin)

FUNDING

None listed



SUGGESTED READING

1. Zalt MB, Bechara RI, Parks C, Berkowitz DM. Effect of routine clopidogrel use on bleeding complications after ultrasound-guided thoracentesis. Journal of bronchology & interventional pulmonology. 2012 Oct 1;19(4):284-7.
2. Ernst A, Eberhardt R, Wahidi M, Becker HD, Herth FJ. Effect of routine clopidogrel use on bleeding complications after transbronchial biopsy in humans. Chest. 2006 Mar 1;129(3):734-7.
3. Stather DR, MacEachern P, Chee A, Tremblay A. Safety of endobronchial ultrasound-guided transbronchial needle aspiration for patients taking clopidogrel: a report of 12 consecutive cases. Respiration. 2012;83(4):330-4.

ARTICLE CITATION



Webb TN, Flanagan E, Martin R, Parks C, Bechara RI. Effect of Routine Clopidogrel Use on Bleeding Complications After Endobronchial Ultrasound-guided Fine Needle Aspiration. Journal of Bronchology & Interventional Pulmonology. 2019 Jan;26(1): 10-14