UAMS MEDICAL CENTER
Acute Care Surgery Guidelines

SUBJECT: Tube Thoracostomy Management Guideline

SUPERSEDES: Tube Thoracostomy Management Guideline 8/11/17 **PAGE:** 1 of 3

RECOMMENDATION(S): Dr. Avi Bhavaraju **APPROVAL: 08/11/2017**

CONCURRENCE(S): All **EFFECTIVE: 08/11/2017**
Revised: 02/15/2019

Purpose:

To provide standard practices for insertion, management, and removal of tube thoracostomy.

Procedure:

Insertion:

1) 2 grams of cefazolin should be given prior to tube thoracostomy placement to reduce empyema rates.[1,7,8] If performed emergently, cefazolin should be administered as soon as possible. If PCN or cephalosporin allergic, 600mg clindamycin may be substituted.
2) Tube thoracostomy placement should be performed under maximum sterile conditions, with full body drape, surgical gown, sterile gloves, cap, mask, and chlorhexidine skin prep unless inserted under emergent conditions.
3) Tube thoracostomy size should be left to the discretion of the performing surgeon, recognizing that 28 and 32 Fr chest tubes are equal in efficacy to 36 and 40 Fr chest tubes for the management of hemothorax.[2]

Management:

1) Chest tubes should be placed to suction at -20cm H_2O for 24 hours after placement.
2) A daily AP radiograph should be obtained for all patients with a chest tube *in situ*.
3) Discontinued suction after 24 hours or when an air leak has sealed-whichever is longer.
4) Following removal of suction, a repeat chest radiograph should be obtained in 3 hours.[3]
5) Chest tubes should be removed when no significant residual effusion is present on CXR and when 24-hr drainage is < 200 mL.[4,5]
6) If the CXR continues to demonstrate the presence of a continued effusion 24 hours after placement of tube thoracostomy, a non-contrasted CT scan of the chest should be obtained to evaluate adequacy of tube placement and need for surgical procedure.[1]

Removal:

1) Chest tubes may be removed at end-inspiration, end-expiration.[6] Both are safe.
2) Following chest tube removal, an occlusive dressing should be placed over the skin exit site and affixed with an adhesive dressing.
3) A PA and lateral chest radiograph should be obtained within 2 hours after chest tube removal and evaluated for clinically significant pneumothorax or pleural effusion/hemothorax. If the patient cannot travel, then an upright portable chest radiograph is acceptable.[6,10,11]

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