Approach to Diagnosis of Pleural Effusion

This practice algorithm has been specifically developed for MD Anderson using a multidisciplinary approach and taking into consideration circumstances particular to MD Anderson, including the following: MD Anderson’s specific patient population; MD Anderson’s services and structure; and MD Anderson’s clinical information. Moreover, this algorithm is not intended to replace the independent medical or professional judgment of physicians or other health care providers.

INITIAL EVALUATION

History and physical

Prior thoracentesis performed?

Yes

No

Chest x-ray PA/lateral followed by ultrasound to guide thoracentesis

Is thoracentesis safe to perform?

Yes

No

Etiology of pleural effusion determined?

Yes

No

Consider a new diagnostic thoracentesis or refer to box A

Is pleural effusion loculated?

No

Yes

Perform thoracentesis and send pleural fluid for:

- Cell count and differential
- Total protein
- Hematocrit
- LDH
- Triglycerides
- Cytology
- Amylase
- Gram stain and culture
- Fungal stain and culture
- Glucose
- AFB stain and culture
- Cholesterol
- Anaerobic culture

CT chest to confirm suspicion of loculation and aid in image guided thoracentesis

Coordinate follow-up with primary service for treatment disposition or additional diagnostic work up

If needed, refer to Management of Malignant Pleural Effusion Algorithm

Follow up within 2 weeks with chest x-ray PA/lateral and clinical assessment

Etiology of pleural effusion determined?

A

Consider:

- CT chest with or without angiogram protocol
- Echocardiogram
- Pleural biopsy

Follow up within 2 weeks with chest x-ray PA/lateral and clinical assessment


d1 If pleural effusion is blood-tinged or serosanguinous, add hematocrit and triglycerides.

If pleural fluid is milky or there is clinical suspicion of chylothorax, add triglycerides.

2 If clinically indicated.
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SUGGESTED READINGS


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DEVELOPMENT CREDITS

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