

Thoracic Trauma

DRIP 3

December 15, 2021

Instructor: Dr. Christopher G. Byers, DVM, DACVECC,
DACVIM (SAIM), CVJ

© 2021 Drip Learning Technologies LLC.

All rights reserved. No part of this publication may be reproduced or transmitted in any form or by any means, electronic or mechanical, including photocopying, recording, or by any information storage and retrieval system, without permission in writing from the copyright owner. Printed in the United States of America

Be advised this document is here to enhance your learning experience and is a cumulative of the slides and transcript & area for your notes. You are welcome to take your notes electronically or print then use it to supplement your learning while watching the drip



Thoracocentesis

- Shave & aseptically prepare thoracic wall at 7th-8th intercostal space
- Needle insertion site is halfway up the thoracic wall
- Insert butterfly needle or over-the-needle catheter perpendicular to chest wall along cranial aspect of the rib at chosen intercostal space
- Upon insertion, reposition needle so it lies more parallel to body wall with bevel facing the pulmonary parenchyma

These patients need to have thoracocentesis performed. So where you're going to shave part of the chest, you're going to aseptically be prepared. Where are you usually going? Somewhere between the 7th and the 8th intercostal space.

Because we're going for air, we're typically in the top third or halfway up the thoracic wall. You're going to insert a butterfly needle or an over the needle catheter perpendicular chest wall at the cranial aspect, so that you're avoiding that neurovascular bundle and the caudal aspect of each rib.

And then you're going to insert the needle and reposition it so that it lies parallel to the body with the bevel facing the pulmonary parenchyma.

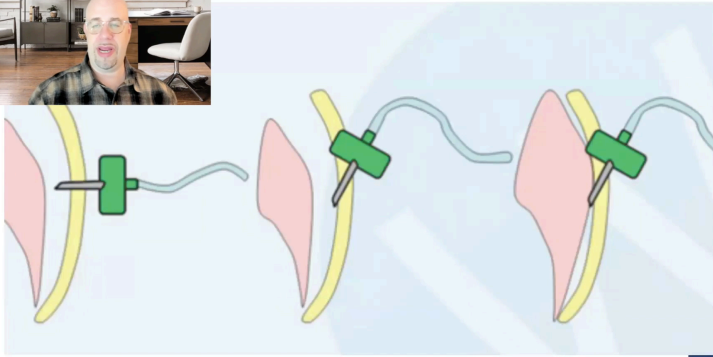
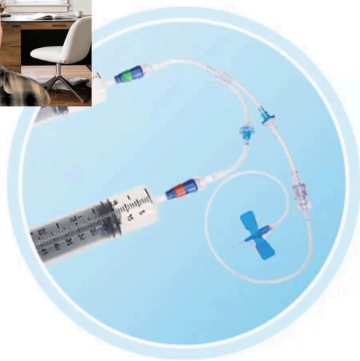


Image courtesy of Dr. Chris Shales

So for those visual learners out there, you go cranial to the rib, 50% of the way up the chest, at least in the dorsal third, if you were to split the lateral thorax into three levels.

And you insert perpendicular to the body at that cranial aspect, and then you're going to redirect your bevel, your needle, so that it's laying flat against the rib with the bevel facing out, so that allows you to maximize the amount of air that you can withdraw.



Some people use the traditional three-way cock system. What you see here is a Y system, which I really like. Essentially, this needle here, the butterfly goes into the thoracic cavity the way that we just talked about.

You use this, the green to aspirate. But you notice there's no three-way stopcock. So how do you get air out or fluid out once you've collected it? You just empty your syringe and it comes out here. And many of us will pull this plunger out and just have it go out to the world, because it's air, and it allows us to do it really quickly.

We're usually just truly doing this pull, aspirate, empty, aspirate, empty, and it works very well. And because these are one-way valves, the air that you're expelling or the fluid that you're expelling, if it was pleural effusion, cannot go down this tube. It has to go out here.

And again, for fluid, yeah, you probably want to have the plunger in. But for air, we just remove the plunger and it allows us to evacuate.



Poll Question #2

So now it's time for poll question number two. True or false? Most rib fractures require surgical stabilization.