



# Hydrothorax in a patient with cirrhosis

## Specific management

### Symptomatic

#### Thoracentesis + start diuretics if no contraindications

- Drain a maximum of 1.5L every 6 hours (expert opinion, limited evidence to guide the upper limit)
- Give 25% Albumin 100cc for every 3 L removed  
\*if pigtail catheter is in place, assess daily and remove within 2-3 days

#### Does the patient meet diagnostic criteria for Refractory hydrothorax?

- Diuretic-induced complications (renal dysfunction, hyponatremia)

OR

- Non-response diuretics

YES

NO

#### If thoracentesis $\geq$ once a month

- Discuss alternative therapies with a Liver specialist if this hasn't been done (i.e., TIPS, transplantation, indwelling pleural catheter)

[Transjugular Intrahepatic Portosystemic Shunt \(TIPS\)](#)

[Hydrothorax-Indwelling Pleural Catheters \(IPCs\)](#)

### Small effusion/Asymptomatic

#### Dosing for combination diuretics

- **Spironolactone** 50-100mg PO QAM starting dose in combo with
- **Furosemide** 20-40mg PO QAM starting dose

[Substituting Spironolactone with Amiloride](#)

[More info on Spironolactone/Furosemide dosing ratio](#)

#### In patients on diuretics, monitor the following

- Q weekly weights (aim for up to 0.5kg of fluid loss/day; those with pedal edema may tolerate up to 1kg/day)
- Q 1-2 weekly creatinine and electrolytes as doses are being increased. Extend to Q1-3 monthly once tolerating a stable dose

#### How to titrate up diuretics

- Increase every 3-7 days as tolerated
- Can double doses if weight loss  $<2$ kg a week and creatinine, electrolytes ok
- Adjust more cautiously and once ascites and edema are cleared, begin to taper diuretics to their lowest effective dosage

[More info on Spironolactone/Furosemide dosing ratio](#)

- Maximum doses Furosemide 160mg, Spironolactone 400mg
- If there is an inadequate response to diuretics, you can use the urinary sodium to check for dietary non-compliance or resistance to diuretics

[See more info on using the urine sodium](#)

**Reduce/Stop if  $\text{Na}^+ \leq 125\text{mmol/L}$  or Renal Dysfunction or Symptomatic hypotension**