

Appendix A Diuretics

Rationale

- Used to control symptomatic volume overload

Beneficial Subsets

- NYHA class II-IV with fluid overload (edema, ascites, weight gain)

Goal/Dose

- Start with furosemide 20 mg/day and increase/decrease as needed
 - Divide the doses BID if > 80 mg/day are required
 - Aim for minimum effective dose to control symptoms of fluid overload
- If volume overload persists despite optimal medical therapy and progressive increases in furosemide dose (i.e. >120 mg BID) consider:
 - Changing furosemide to bumetanide as oral absorption may be improved
 - Cautious addition of metolazone 2.5-5 mg 30 min prior to furosemide dose
 - Start with a test dose 3 times/week, closely monitoring daily weight, as well as serum K⁺ and Cr/eGFR
- Note: Diuretics can be stopped once fluid overload resolves

Monitoring

- Check serum Cr, Na⁺ and K⁺ before initiating therapy and one to two weeks after each dose adjustment
- Watch K⁺ carefully: maintain K⁺ between 4.0-5.5 mmol/L
 - K⁺ may increase when using K⁺ sparing diuretics (spironolactone, triamterene, amiloride), especially when combined with an ACE-I or ARB
 - K⁺ may increase when K⁺ depleting diuretics decreased / discontinued while patient on K⁺ sparing diuretic, ACE-I and / or ARB
 - K⁺ may decrease when using K⁺ depleting diuretics (furosemide, metolazone, hydrochlorothiazide)

Dealing with Side-Effects

- If Cr increases > 30% from baseline
 - Reduce/hold diuretic until volume status normalizes
- If muscle cramping occurs check magnesium and calcium and replace as necessary
- If nocturia is a concern, avoid diuretic therapy after 2 pm

	USUAL STARTING DOSE	MAXIMUM TOTAL DAILY DOSE	DURATION
K⁺-depleting diuretics			
• Furosemide ²	20-40 mg daily or BID	600 mg	6-8 hours
• Bumetanide ²	0.5-1 mg daily or BID	10 mg	4-6 hours
• Ethacrynic acid ²	25-50 mg daily or BID	400 mg	6-8 hours
• Metolazone ³	2.5 mg daily	20 mg	12-24 hours
• Hydrochlorothiazide ³	25 mg daily or BID	200 mg	6-12 hours
K⁺-sparing diuretics			
• Triamterene ¹	50-75 mg BID	200 mg	7-9 hours
• Amiloride ¹	5 mg daily	5 mg	24 hours

¹potassium sparing, ² loop diuretic, ³ thiazide diuretic