Baclofen Pumps

Used to treat severe spasticity of spinal cord origin (spinal cord injury, MS) or cerebral origin (cerebral palsy, TBI)

Drowsiness/somnolence
Dizziness/lightheadedness
Slow/shallow breathing
Seizures
Loss of consciousness
Hypothermia

→ Consider ***overdose!***

Itching
Tingling sensation
Hypertension
Spastic or stiff muscles
Agitation
Hyperthermia

→ Consider ***withdrawal!***

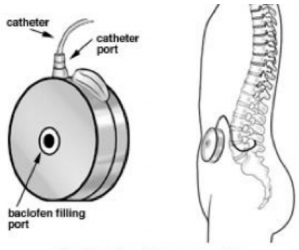
If you suspect withdrawal or other baclofen pump malfunction: **CALL THE ON-CALL PM&R TEAM**

Additional questions to ask (preferably before calling PM&R):

- Why do they have a shunt?
- When did symptoms start? Gradual/acute onset?
- Is itching present?
- Does the patient have a shunt?
- When was pump last refilled?
- When was last dose change?
- Was concentration changed at refill?
- When was pump implanted?
- Have you heard pump beeping? (Can listen w/ stethoscope)
- Have any rescue doses of oral baclofen been given?
- If enteral baclofen is being used, what is the formulation?

Other Considerations:

- Evaluate other causes of symptoms (including noxious stimuli that will increase tone) and obtain a thorough review of systems, including bowel (constipation) and bladder (UTI/retention)
- If extremely agitated or obtunded – reassess patient and consider ICU evaluation *(Patients and their caregivers should be advised to always present to the ED in this situation.)*
- If symptoms have been present <24-48 hours, the patient may get worse before getting better
- Check the chart for prior PM&R notes for guidance
- Be sure to evaluate pump site (often palpable in lower abdomen)



Treatment of Withdrawal

- Enteral baclofen (use tablets, not liquid, when possible for more reliable dosing)
- Enteral Valium (can be given IV if needed) alternating with enteral baclofen
- Typically give both meds q4h (so *a* med is given q2h)
- IV fluids to maintain hydration and decrease risk of rhabdomyolysis
- Pt may require transfer to ICU for additional treatment

Give as much medication as you need to treat withdrawal! You can support patients for side effects (ie: respiratory depression) if needed.

What workup might PM&R do?

- Interrogate pump to evaluate amount of baclofen in pump, rate of pump, etc.
- Use needle to withdraw from main port (reservoir fill port - the pump itself) and side port (catheter access port, which goes to CSF). *Side port aspiration should draw back CSF and can be used to check for catheter continuity.*
- XR to evaluate pump position, intrathecal level of catheter tip, and continuity of catheter. ***This can be done by primary team, but other imaging should be arranged by PM&R***.
- Other options include a dye study to evaluate for leaks and cone-beam CT for more detailed imaging.

Other Tips and Tricks

- Issues are more often with the catheter than the pump itself
- Pumps should be checked with programmer after MRI (discuss with PM&R prior to MRI for scheduling)
- Infections in the pocket around the baclofen pump are more common in the weeks following surgery but can occur at any time.

Adapted from the Cincinnati Children's Complex Care Team Resource Guide, UpToDate