Initial Treatment Failure

- At 3 yo – Stage IV Neuroblastoma
- Chimeric antibody therapy attempted
- Pain management – morphine
- Complications: pain, ↑ BP, hallucinations, sedation, constipation
- Cause of complications - chimeric antibodies and/or morphine

Change in Regimen

- Fentanyl PCA – “Failure”
- Gabapentin 5mg/kg PO TID started
- Day #2 – pain dramatically reduced
- Fentanyl PCA usage: ↓ demands
  **Doses 86-91/day → 12/day**
- Gabapentin x 3 days with infusion
- Demand dose ↓d each day

Subsequent Admissions

- Gabapentin 5mg/kg PO TID
- Started 2 days prior to admissions
- Used throughout hospitalization
- Demand doses ↓d to 0 per day
- PCA eventually discontinued
- Gabapentin d/c - end of each course

Discussion

- Gabapentin – widely used
- Rx neuropathic pain
- Days to weeks to be effective
- Our case -
  - 24-48 hours to be effective
  - Effective 2 days prior to insult
- Avoided opioid side effects

Background

- Chimeric antibody infusions used for high risk neuroblastoma
- Significant acute “neuropathic” pain
- Morphine PCA used successfully
- Opioid side effects common
- Gabapentin – Rx for neuropathic pain

Neuroblastoma Relapse

- 12 yo – relapse, no Rx since 3 yo
- Chimeric antibody therapy initiated
- Morphine & hydromorphone refused
- Fentanyl PCA (low dose) initiated
- Pain - not well controlled
- Side effects: sedation, constipation

Chimeric Antibody Therapy for Neuroblastoma

- Surface antigen target:
  - GD2: disialoganglioside antigen
  - On neuroectodermal tumors

- Mechanism:
  - Antibody-dependant cell-mediated cytotoxicity
  - Complement-mediated cytotoxicity

- Side effects:
  - Pain, ↑ HR, ↑ BP, ↑ T°
  - Transient neuropathy

- Pain mechanism:
  - GD2 also on PNS (pain)

Gabapentin molecular structure