Galcanezumab-Induced Anaphylaxis: A Case Report

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Monoclonal Antibodies & Anaphylaxis
Anaphylaxis Management

- **Epinephrine**
  - First line treatment (NIAID, FAAN – 2006)
  - Adrenergic receptors affected by anaphylaxis (Simons et al. 2010)
  - In vivo B2 activation in basophils/mast cells (Kaliner et al. 1974)

- **Antihistamines**
- **Steroids**
Galcanezumab

- Humanized mAb, binds to calcitonin gene-related peptide (CGRP) ligand and blocks its binding to the receptor.
- Preventive treatment of episodic or chronic migraine (FDA, 2018)
- Three multicenter, randomized, double-blind, placebo-controlled studies
- 240 mg SC loading dose, then 120 mg/month
- Side effects: site reactions, nasopharyngitis, and nausea
47F hx asthma, anaphylaxis. 
CC: Shortness of breath, generalized pruritus, flushing, throat and mouth swelling 20min after self-administration of Galcanezumab (120mg x2 SC) 

Diphenhydramine 100 mg PO 
Epinephrine 0.3 mg IM x2 
Albuterol/ipratrop. nebulization 

Emergency Room: 
HR: 122 bpm, RR: 28 rpm 
On distress, stridor, decreased breath sounds B/L 
Normal Imaging 
Mild leukocytosis/no shift 
Albuterol/ipratropium q4h 
Methylprednisolone 1mg/kg 
Famotidine 20mg IV BID 

18h post intubation 
✓ Hemodynamically stable 
✓ Minimal sedation 
✓ SBT passed 
✓ Methylprednisolone 2mg/kg 
✓ Albuterol/Ipratropium inh. q4h 
✓ Famotidine 40mg IV BID

1h post extubation 
7:05pm 
7:25pm 
RR >30rpm 
Wheezing/Stridor 
Epinephrine IM X3 
Same dose steroids 
Albuterol/Ipratropium nebs. 
Racemic epinephrine nebs.
DIFFERENTIAL
- Angioedema
- Asthma
- Urticaria
- Foreign body
- Pulmonary embolism
- Vocal chord dysfunction
- Panic attack
- Anxiety

~27 days

- Basiliximab
- Natalizumab
- Rituximab

PMID: 21853842, 11136200, 17963462, 19188571, 23432476, 23713740; FDA ID: 4443531
Thank you!!!!!