

Case Study:
Rabbit's foot perhaps not so lucky

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Patient History




- 29 year old female with ESRD secondary to IgA nephropathy presents for renal transplant
- Peritoneal dialysis
- Well-controlled HTN (labetolol, losartan) and asthma (inhaled tiotropium)
- Surgical History: renal biopsy, PD catheter, C-section
- Allergies
 - Lisinopril (angioedema), amoxicillin (diffuse rash)
 - Scanned OSH H&P lists "allergic rhinitis d/t animal"

Intraoperative course




- 2225: Induction of anesthesia with lidocaine, fentanyl, propofol, and cisatracurium
- 2235: Central line placement, clindamycin, dexamethasone (100mg)
- 2314: Initiated rabbit anti-thymoglobulin infusion (rATG), noted increased in PIP \rightarrow 10 63 cm H20), decreased/absent breath sounds, SpO₂~ 30%




Intraoperative course (cont)

- 2320: HR 140s, systolic BP 70s, **rATG discontinued**, administered epinephrine, albuterol, ranitidine, diphenhydramine, and crystalloid
- 0200: Stabilized sufficiently on epinephrine infusion for transfer to ICU



Post-operative Course

- Weaned from ventilator and epinephrine infusion within 48 hours, discharged one week later
- Allergy consult inpatient:
 - Latex RIA panel negative, tryptase >400 (ref range 0.4-10.9 ug/L), Rabbit Epithelium IgE high positive at 5.01 (ref range <0.3 kU/L)
- Allergy follow-up 2 months later:
 - "positive skin test to RABBIT on percutaneous skin test and ANTI-THYMOGLOBULIN at 2 different dilutions of the RABBIT ANTI-THYMOGLOBULIN."
 - Repeat tryptase 19 µg/L



What is rATG?

- Ischemic/reperfusion injury protection and long-term rejection prophylaxis of transplanted kidney
 - Basiliximab is a mouse-derived, monoclonal antibody immunomodulator to IL-2 receptor
 - Antithymocyte globulin is horse or rabbit-derived, polyclonal antibody against human T-cells
 - Efficacy generally similar, but rATG has been shown to be better in "high risk patients"

Deeks et al. Drugs 2009; 69 (11): 1483-1512

rATG reactions



- **Cytokine release syndrome / Cytokine storm**
 - Fever, leukopenia, thrombocytopenia
 - More common with rATG than with other Ab preparations
- **ANAPHYLAXIS**
 - Triggered by food, drugs, insect venoms, latex
 - Intraoperative: NMB (69%), abx (12%), latex (8%)
 - IgE/mast cell degranulation and rapid release of preformed mediators, including histamine, proteoglycans, serotonin, tryptase, chymase and lipid-derived mediators (PGD2, LTC4, LTD4, LTE4)
 - Vasodilation, increased vascular permeability, hypotension, bronchospasm
