

LIFE-THREATENING, INTRAOPERATIVE HEMODYNAMIC INSTABILITY IN A QUADRAPLEGIC

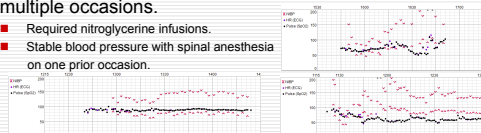
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Background




- 57 year old quadriplegic male, remote C4-C5 spinal injury presenting for cystoscopy.
 - PMHx: Autonomic dysreflexia, OSA, neurogenic bowel/bladder.
 - Allergies: Sulfa drugs
- Prior history of systolic blood pressure (SBP) near or above 200 mmHg while under GA for cystoscopy on multiple occasions.
 - Required nitroglycerine infusions.
 - Stable blood pressure with spinal anesthesia on one prior occasion.



Case Description






- L4-L5 spinal performed in OR
 - Intravenous midazolam (2mg) & fentanyl (50 mcg)
 - Intrathecal hyperbaric bupivacaine (12.5 mg)
 - Intravenous cefazolin (2g)
- On return to supine position:
 - SBP rapidly decreased from baseline of 140 mmHg to 60 mmHg.
 - The patient became tachycardic.
 - Breathing pattern became shallow and bradypneic.
 - Level of responsiveness quickly decreased.



Case Description


- Vasopressin and epinephrine boluses given.
- Trachea intubated. Intra-arterial BP monitoring & central venous access established.
 - Vasopressin & epinephrine infusions started.
- Diffuse blanching erythema noted.
 - No mucosal edema or wheezing.






Case Description

- Procedure cancelled.
 - Transported to medical ICU.
 - Weaned off vasopressors & extubated in 3 hours.
 - Serum tryptase 125 mcg/L (reference range 0.4 – 10.9).
- Skin testing to bupivacaine:
 - No cutaneous, gastrointestinal, cardiovascular or respiratory symptoms.
 - No evidence of IgE-mediated hypersensitivity to bupivacaine.



Discussion

- Initial working diagnosis was a high or total spinal.
- Tachycardia, skin changes and markedly elevated tryptase most consistent with anaphylactic reaction.
 - Cephalosporin challenge now pending.



Discussion

- Elevated tryptase:
 - An effective marker of recent mast cell degranulation.
 - Laroche, D. et al. (1991) Anesthesiology 75: 945-949.
 - Correlation with subsequent positive skin testing.
 - Fisher, M et al. (1998) Br. J. Anaesthesia 80: 26-29.

- Anaphylaxis can be an exceedingly difficult intraoperative diagnosis to make.
