

Children's Mercy Kansas City

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Care Process Models

Quality Improvement and Clinical Safety

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Perioperative Steroid Stress Dosing

Children's Mercy Kansas City

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These guidelines do not establish a standard of care to be followed in every case. It is recognized that each case is different and those individuals involved in providing health care are expected to use their judgment in determining what is in the best interests of the patient based on the circumstances existing at the time. It is impossible to anticipate all possible situations that may exist and to prepare guidelines for each. Accordingly, these guidelines should guide care with the understanding that departures from them may be required at times.

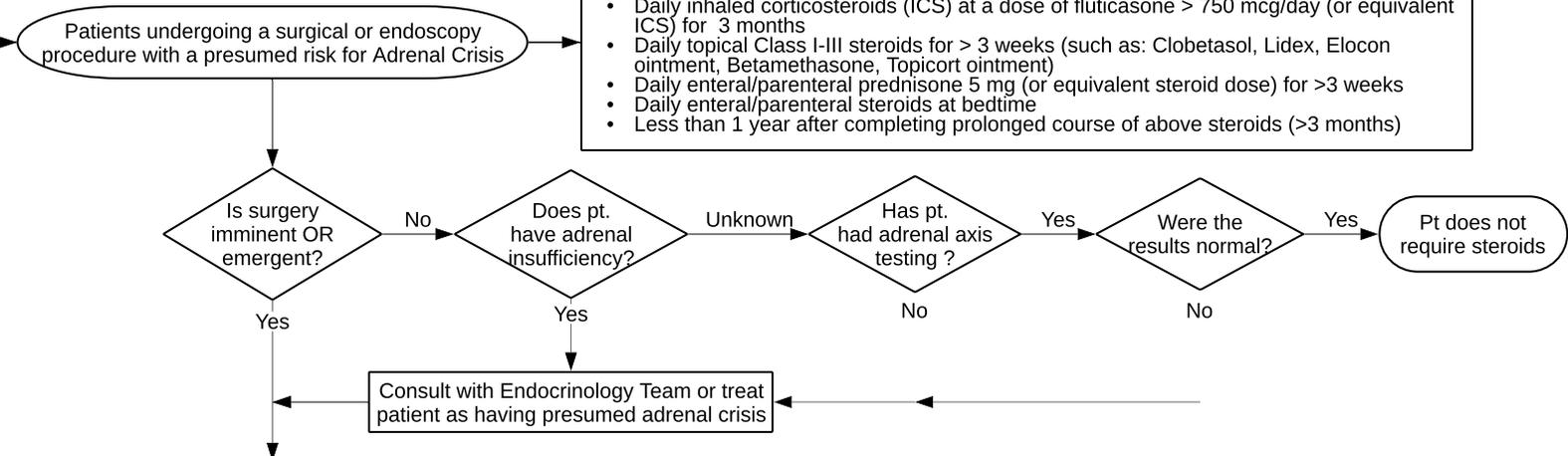
Situations in which operative steroid stress-dosing is necessary:

- Pt. is taking steroids and exhibits Cushoid features

Consult Hematology / Oncology prior to administering a steroid to any diagnosed hematology / oncology patient
Rationale: The patient may not be able to receive steroid therapies for their protocol assignment.

Situations in which stress-dose steroids maybe necessary:

- Daily inhaled corticosteroids (ICS) at a dose of fluticasone > 750 mcg/day (or equivalent ICS) for 3 months
- Daily topical Class I-III steroids for > 3 weeks (such as: Clobetazol, Lidex, Elocon ointment, Betamethasone, Topicort ointment)
- Daily enteral/parenteral prednisone 5 mg (or equivalent steroid dose) for >3 weeks
- Daily enteral/parenteral steroids at bedtime
- Less than 1 year after completing prolonged course of above steroids (>3 months)



In AM, prior to procedure:

- Patients on hydrocortisone should receive **triple maintenance dose for the morning hydrocortisone dose.**
- Patients on home steroid dosing, see below, do not require additional stress dosing for minor stress procedures, and should receive their usual dosing on the morning of the procedure:
- <3 years of age: Prednisone/Prednisolone dosing > 5 mg every other day (2.5 mg/day)
- 3-12 years of age: Prednisone/Prednisolone dosing > 10 mg every other day (5 mg/day)
- >12 years of age: Prednisone/Prednisolone dosing > 20 mg every other day (10 mg/day)

Minor Stress Surgeries:

- Minor skin procedures
- Endoscopies
- Dental procedure
- Ears tubes
- Imaging using anesthesia or sedation

Moderate Stress Surgeries:

- Appendicitis
- Cholecystectomy
- Hernia repair
- Orthopedic surgery (minor)
- T/A

Severe Stress Surgeries:

- Brain surgery
- Heart surgery
- Orthopedic surgery (major)
- Spine surgery
- Transplant surgery

In AM, prior to procedure, pt should receive usual maintenance dose of morning hydrocortisone dose (po, pg or ng)

Resume maintenance dosing once stable (for example: afebrile, reasonable pain control, normotensive for 24 hours); Pt may be discharged if otherwise meeting discharge criteria.

Consider Endocrine Consult for cortisol management

Hydrocortisone
 Administered **before incision or procedure starts** based on:

- 50 mg / m² OR
- RAPID hydrocortisone dosing:
 - < 3 years old: 25 mg
 - 3-12 years old: 50 mg
 - > 12 years old: 100 mg

Intra-procedure redosing for hydrocortisone

- Occurs for cases (Surgery / Procedure) with a duration length greater than 8 hours
- Repeat initial hydrocortisone dose 8 hours after above dose was given

Post-procedure dosing for hydrocortisone

- Provide hydrocortisone 12.5 mg/m² IV q6h or if pt able to tolerate PO, 17 mg/m² po/pg/ng q8h **OR**
- RAPID post-procedure hydrocortisone dosing:
 - < 3 years old: 6.25 mg IV q6h or 7.5 mg po/pg/ng q8h
 - 3-12 years old: 12.5 mg IV q6h or 17.5 mg po/pg/ng q8h
 - > 12 years old: 25 mg IV q6h or 35 mg po/pg/ng q8h

Dexamethasone
 0.1 mg/kg - 0.2 mg/kg or 10 mg **maximum** dose for antiemetic

Intra-operative redosing for dexamethasone:

- DO NOT give an additional dose intra-operative** (0.1 – 0.2 mg/kg will provide adequate cortisol coverage for the entire surgical intervention)

Post-procedure dosing:

- Change to hydrocortisone (refer to post-procedure dosing guidelines for hydrocortisone above)