Physiologic Changes of Pregnancy — Ob/Gyn Renal

Review

Tracie Shea 1/17/08

Pulmonary -↑ RR and V_T
Cardiovascular - ↑ CO and HR, ↓ BP
Renal - ↓ BUN and Cr, ↑ GFR
Heme - ↑ Volume, WBC, D-dimer, ↓ Hgb and platelet

General landmarks for gestational height.
12 weeks – Pubic Symphysis
20 weeks – Umbilicus
36 weeks – Costal Margin

RhoGam
50 mcg IM < 12 weeks gestation
300 mcg IM > 12 weeks gestation
Must be administered within 72 hours of the event.

Vaccines
MMR and Smallpox - contraindicated in pregnancy
Tetanus, rabies, varicella, hepatitis are ok

The discriminatory zone
Transabdominal ultrasound- ß-HCG > 6500 mIU (6 weeks).
Endovaginal ultrasound- ß- HCG >1500 mIU (5 weeks).

Molar pregnancy
Complete mole- 46 XX- both paternal in origin, no fetal tissue.
Partial mole- 69 XXY- may have viable fetus
ß-HCG higher than expected
"Snowstorm" appearance on u/s

Pregnancy induced HTN
PIH – BP >140/90
Mild preeclampsia – BP > 140/90 AND proteinuria
Severe preeclampsia – BP > 160/90 OR symptoms of end organ damage.
Eclampsia – BP >140/90 and tonic-clonic seizures

Mastitis
Usually Staph
Tx: Dicloxacillin 500 mg qid x 1 week, 1st generation cephalosporin, I&D if necessary
Continue breast feeding

STDs
GC- Ceftriaxone IM (or Cefixime PO)
Chlamydia – Azithromycin PO (or Doxycycline PO x 7d)
H. ducreyi- Azithromycin (or Ceftriaxone)

UTIs
Most commonly caused by E. coli. Consider pseudomonas if catheter.
Diagnosis requires 10^5 colony-forming bacteria on culture
(correlates with 10 WBC on hpf)

Phimosis- inability to retract foreskin
Paraphimosis- inability to replace retracted foreskin back over the glans ***emergency***
Peyronie's- penile fibromatosis

Staghorn Calculi - urea splitting organisms – struvite stones
Ovarian tumors – epithelial
Testicular tumors – seminomas

Table 1

A quick look at the differential diagnosis for scrotal pain

Signs and symptoms	Testicular torsion	Testicular appendix torsion	Epididymitis
Onset, nature of pain	Severe, usually abrupt onset during rest or sleep, may be referred to thigh, groin, abdomen, or flank	Less severe, abrupt or gradual onset, left or right side; isolated tenderness superior pole of testis or epididymis	More often gradual onset; posterior to testicle; may be referred to abdomen
History of pain	About one third of cases	Uncommon	Uncommon
Age	Most common 12-18 y or neonatal; otherwise rare < 8 y or > 35 y	Most common 7-12 y	Rare before puberty; more common in sexually active men
Nausea	Common	Uncommon	Common
Vomiting	Common	Uncommon	Uncommon
Fever	Uncommon	Uncommon	Common
Dysuria	Uncommon	Uncommon	Common
Cremasteric reflex	Absent	Present	Present

Distinguishing Acute Tubular Necrosis From Prerenal Azotemia

Test*	**Acute Tubular Necrosis**	**Prerenal Azotemia**
Rate of creatinine rise	0.3–0.5 mg/dL/day	Variable and fluctuates
BUN/creatinine ratio	10–15:1	> 20:1
Urine osmolality (mOsm/kg)	< 450	> 500
Urine Na (mEq/L)	> 40	< 20
Urine/plasma creatinine ratio	< 20	> 40
Fractional excretion of Na (%)	> 2	< 1
Urinary sediment	Muddy brown granular casts, epithelial cell casts, free epithelial cells	Normal or with hyaline casts
Response to saline expansion	Variable, typically no immediate reduction in serum creatinine	Serum creatinine normalizes in volume-depleted states

*Criteria may not apply in the setting of chronic renal failure and recent diuretic use.