EMCP 506: Toxicologic and Dermatologic Emergencies

Toxicology Objectives

At the end of the course the learner will integrate material covered in online lectures, reading assignments, and vignettes and apply this knowledge to clinical problem solving. Specifically, the learner should be able to:

1. Describe the initial steps in the treatment of the overdose patient with respect to the primary survey (airway, breathing, circulation).
2. Integrate history, vital signs, physical exam findings, and immediately available bedside tests (e.g., blood glucose, ECG) in order to help gauge the severity of toxic ingestions.
3. Describe the various methods, indications, and contraindications of gastrointestinal decontamination.
4. Describe the indications and contraindications of common antidotes including: naloxone, N-acetylcysteine, sodium bicarbonate, physostigmine, digoxin Fab, glucagon, calcium gluconate, fomepizole, dextrose, methylene blue, deferoxamine, octreotide, pralidoxime, pyridoxine, vitamin K
5. Evaluate the limitations of the urine drug screen in the treatment of patients that present to the ED with acute drug overdoses.
6. Compare and contrast the common toxic ingestions that can result in an anion gap metabolic acidosis.
7. Compare and contrast the physical findings found in the common “toxidromes” including: opioid, sympathomimetic, cholinergic, anticholinergic, salicylates, and serotonin syndrome
8. Interpret ECG findings in patients that present with possible tricyclic antidepressant toxicity
9. Describe the diagnostic approach and treatment of toxic alcohol ingestion including: methanol, ethylene glycol, and isopropyl alcohol. Understand the role of the ‘osmolal gap’ in the diagnosis of toxic alcohol toxicity.
10. Distinguish between the various possible opiate overdose scenarios including: heroine, methadone, fentanyl, propoxyphene, oxycodone,
11. Evaluate the clinical features, potential complications, and treatment for sympathomimetic toxicity (cocaine, amphetamines)
12. Compare and contrast the clinical presentation, diagnostic approach, and treatment of acute versus chronic salicylates toxicity.
13. Describe the approach to the patient with acute acetaminophen toxicity. Evaluate the role of the Rumack-Matthew nomogram.
14. Describe the presentation, diagnostic evaluation, and treatment of other toxic ingestions including:
    - Alcohol
    - Benzodiazepines and other sedatives
    - Digoxin
    - □-Blockers

- Calcium channel blockers
- Phenytoin
- Lithium
- Nonsteroidal anti-inflammatory drugs (NSAIDs)
- Iron
- Hydrocarbons and volatile substances
- Caustics
- Cyanide
- Hypoglycemic agents

Dermatology Objectives

At the end of the course the learner will integrate material covered in online lectures, reading assignments, and vignettes and apply this knowledge to clinical problem solving. Specifically, the learner should be able to:

1. Identify and describe the appropriate ED care for the following types of dermatitis: toxic epidermal necrolysis, exfoliative dermatitis, seborrheic dermatitis, alopecia areata, venous stasis, eczema, psoriasis.
2. Identify and describe the appropriate ED care for the following maculopapular lesions: erythema nodosum, erythema multiforme, HSP, purpura, urticaria, Steven Johnson's syndrome.
3. Identify the following Vesicular/Bullous lesions: pemphigus vulgaris and bullous pemphigoid.
4. Identify the following skin manifestations of infectious diseases: pityriasis, scarlet fever, Rocky Mountain spotted fever, enterovirus, measles, varicella, rubella, anthrax, roseola, Kawasaki's disease, toxic shock syndrome, disseminated gonococcal infection, and meningococcemia.
5. Identify and describe the treatment for the following skin infections: abscesses, cellulitis, erysipelas, impetigo, staphylococcal scalded skin syndrome, candidal infections, parasitic infestations, erythema infectiosum, herpes simplex, herpes zoster, molluscum contagiosum, and warts.