Medical Emergencies: On the Sidelines and in the Training Room

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Background

• Certified athletic trainers are often the “go to” resource for the health and wellness needs for many athletes, families, coaches, staff and communities

• Many different medical conditions, both injuries and illnesses, can be and are seen in the training room and on the sidelines
Objectives

• Describe clinical presentations of serious and life threatening conditions
• Identify risk factors and diagnostic criteria
• Discuss clinical pearls, principles and pitfalls in diagnosing medical emergencies
• Ages 13-30
What We Are Not Talking About

- Head injuries including concussions and traumatic brain injuries
- Cervical spine injuries or other musculoskeletal injuries
- Cardiopulmonary arrest
- Depression, suicide, mental health
- Eating disorders, female athlete triad
Medical Emergencies

• Heat Illness and Heat Stroke
• Hyponatremia
• Abdominal emergencies (appendicitis, ectopic pregnancy, testicular torsion)
• Infectious emergencies (meningitis, ocular herpes)
• Cancer presentations (hodgkins lymphoma, testicular cancer, melanoma)

• Early recognition and identification is key!
Heat Stroke

- Risk factors
- Presentation
- Diagnosis
- Treatment
- Further management
• Korey Stringer
• Steve Belcher
• NCAA
• High school football
• Pearls
• Related issues
• Sickle cell trait
• Exertional rhabdomyolysis
Hyponatremia

• Risk factors
• Presentation
• Diagnosis
• Treatment
• Further management
• Marathon deaths
  – 2007 London, 2002 Boston
• 2008 Bakersfield high school athlete
• Radio contest “hold your wee for a wii”
• Pearls
Abdominal Emergencies

• Appendicitis
  – Presentation
  – Diagnosis (McBurney’s point)
  – Treatment

• Ectopic pregnancy
  – Presentation
  – Diagnosis
  – Treatment
More Abdominal Emergencies

• Splenic injury
  – Presentation
  – Diagnosis
  – Treatment

• Testicular torsion
  – Presentation
  – Diagnosis
  – Treatment

• Pearls
Infectious Emergencies

• Meningitis
  – Presentation
  – Diagnosis
  – Treatment
  – Brittany F
• Ocular herpes
  – Presentation
  – Diagnosis
  – Treatment
• Pearls
Cancer

• Hodgkins lymphoma
  – Presentation
  – Age, persistent lymphadenopathy

• Testicular cancer
  – Presentation
  – Age, sex, testicular mass, metastatic sx

• Melanoma
  – Presentation
  – ABCDE mnemonic
• Nicole Hester  
  – NCAA Jimmy Valvano award winner
• Brian Kennedy  
  – Crew athlete with persistent lymph node
• Pearls
• Unexplained weight loss, night sweats, fever of unknown origin
Cardiopulmonary Emergencies

• Sudden Cardiac Death
  – Risk factors
  – Family history
  – Signs and symptoms

• Tension Pneumothorax
  – Rib fracture

• Asthma

• Pearls
Principles and Pitfalls

• Early recognition of these conditions is key
• Prompt identification will lead to better outcomes
• Failure to treat may lead to death or permanent disability
Summary

• Certified athletic trainers are often the “go-to” primary healthcare providers for athletes
• Be familiar with common conditions and with potentially dangerous conditions
• Generate two differential diagnosis lists: most common to least, and most dangerous to least
Summary

• If you don’t think about the diagnosis, you won’t ever make the diagnosis
• Generate a comprehensive differential diagnosis list
• Do the right thing for your patients