MOTORCYCLE INJURIES

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SITC

- SIU School of Medicine
- Memorial Medical Center
- St. John’s Hospital
- 1200 patients a year
  - 70% motorized vehicles
  - 6% motorcycle crashes
RISKS

• Crash rate with mortality
  13 per 100,000 for car
  72 per 100,000 for motorcycle

• Increased risk of fatality with age
  > 40 y/o - 20x more likely to die than other vehicle operators

• 75 % of crashes with car

• 25 % of crashes single vehicle – especially slide outs
CAUSES

- Causes of injury and fatality
  - Increased speed
  - Increased bike size
  - ETOH use
    - Common cause of single vehicle crash
    - Level > 0.08 seen in 30% of fatal crashes
  - Lack of being seen by motorists
RISK FACTORS

• No external protection
• Exposed skin
• Exposed fuel tank
  62 % with fuel leak
• High rate of ejection
• Smaller than a car
PREVENTION

• Bike maintenance
• Full skin protection
• Avoid ETOH
• Use of headlamps
• Wear conspicuous clothing
• Antilock brake
• Avoid texting/distractions
HELMET

- Reduce risk of death 37 %
- Prevent 700 + deaths
- Preserve visibility
PREVENTION
INJURIES
Lower leg
THIGH - FEMUR
FEMUR
RISKS

• Compartment syndrome
• Vascular injury
• Neurologic damage
• Loss of bone length
• Osteomyelitis
Pelvis
Straddled the Motorcycle
Pelvic Fractures
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Bleeding Sources

- Bone
- Soft tissue
- Veins
- Arteries
Pelvic Fractures

Anatomy at risk
- nervous
- genito-urinary
- gastrointestinal
- vascular
UPPER EXTREMITY

- Humerus
- Radius
- Ulna
- Hand
HUMERUS
FOREARM
HEAD
SUBDURAL
SUBARACHNOID
CHEST

- Rib fractures
- Pulmonary contusion
- Hemothorax
- Pneumothorax
Chest CT

- Right pneumothorax
Pulmonary Contusion

- Chest CT - Pulmonary contusions
Chest CT

- Partial traumatic aortic transection
CASE 1

• 22 y/o male on motorcycle
• Hit pole at > 60 mph
• Had helmet
• C/O left shoulder pain
• Normal BP and HR
CASE 2

• 40 y/o female who was on blind date
• Passenger in MCC – thrown 40 ft
• “wrapped around guardrail”
• Arrived awake and alert
• HR 126  BP  99/50
CASE 2

• Multiple deformities right leg
• Large wound in right groin
• Upper extremity deformity
COURSE

- Had attempted bypass graft
- Renal failure with dialysis
- Rhabdomyolysis
- Multiple wound debridements
- Amputation above knee
- Osteomyelitis