



E
M
E
R
G
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C
Y

M
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D
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E

TRAUMA

General approach





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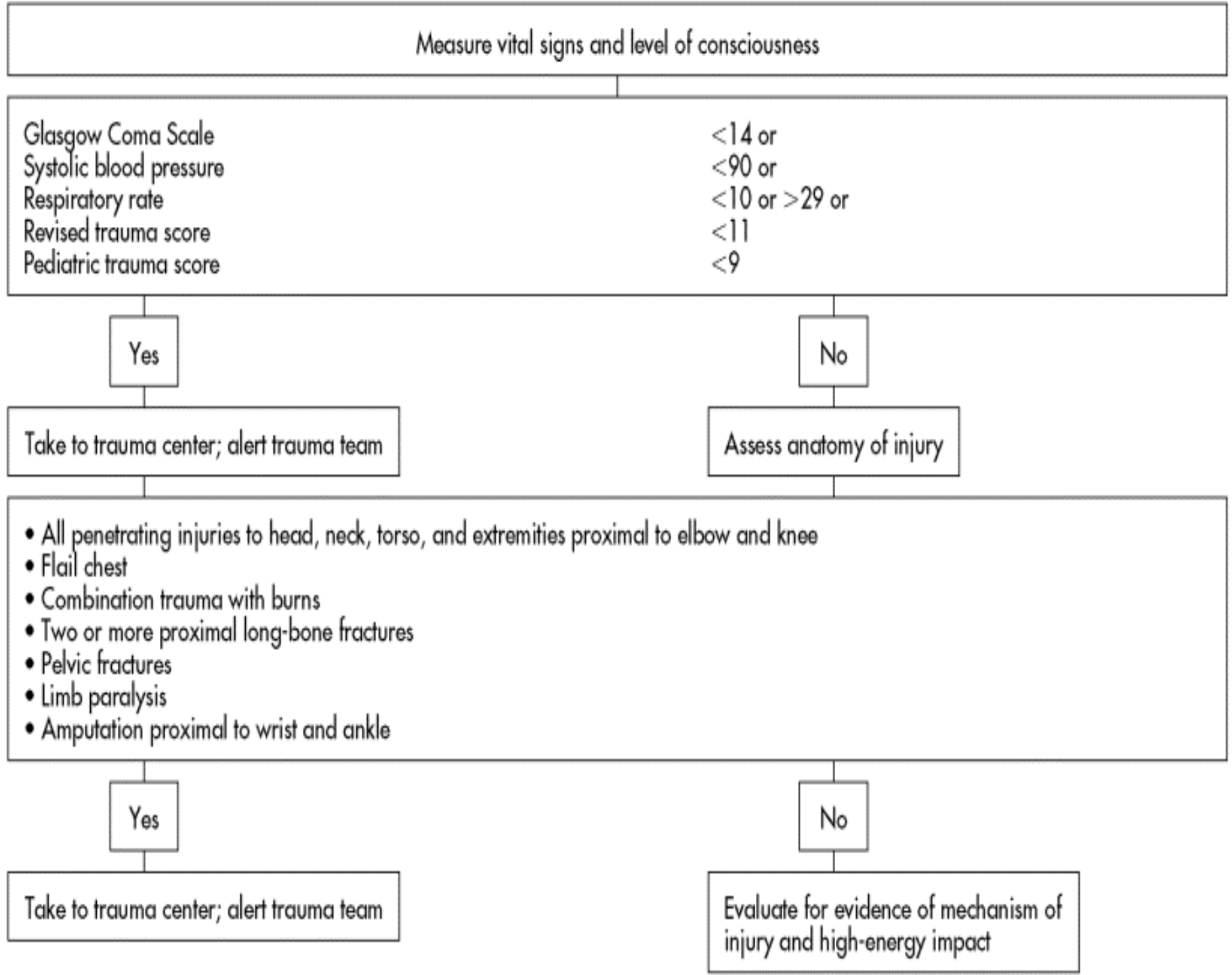
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Trauma systems

- RTS, ISS, Outcome evaluation
- Triage decision scheme
- Trauma mechanism





Step 3

- Ejection from automobile
- Death in same passenger compartment
- Extrication time >20 minutes
- Falls >20 feet
- Rollover

- High-speed auto crash

Initial speed >40 mph
Major auto deformity >20 inches
Intrusion into passenger compartment >12 inches

- Auto-pedestrian/auto-bicycle injury with significant (>5 mph) impact
- Pedestrian thrown or run over
- Motorcycle crash >20 mph or with separation of rider from bike

Yes

No

Contact medical control and consider transport to a trauma center
Consider trauma team alert

Step 4

- Age <5 years or >55 years
- Cardiac disease, respiratory disease
- Insulin-dependent diabetes, cirrhosis, or morbid obesity
- Pregnancy
- Immunosuppressed patients
- Patient with bleeding disorder or patient on anticoagulants

Yes

No

Contact medical control and consider transport to a trauma center
Consider trauma team alert

Reevaluate with medical control

WHEN IN DOUBT TAKE TO A TRAUMA CENTER



Principles of Trauma Management

- Organized team approach
- Priorities in management and resuscitation
- Assumption of the most serious injury
- Treatment before diagnosis
- Thorough examination
- Frequent reassessment
- Monitoring



1⁰ – 2⁰ Survey Approach

1⁰

A
B
C
D
E

assess & manage



basic interventions

2⁰

A
B
C
D

assess & manage



advanced interventions
adjuncts and tests



1⁰ – immediate life-threats

- | | | |
|---|--------------|--------------------------|
| A | Airway open? | C-spine |
| B | Breathing? | Decompression |
| C | BP, pulse? | Control bleeding, fluids |
| D | Disability? | GCS, Pupils |
| E | Exposure | Keep warm |



Initial Assessment (Primary Survey)

Airway with C-Spine Control

Anticipate airway problems with

- ◆ Decreased level of consciousness
- ◆ Head trauma
- ◆ Facial trauma
- ◆ Neck trauma
- ◆ Upper thorax trauma
- ◆ Severe Burns to any of these areas

Open, Clear, Maintain



Breathing

- Look
- Listen
- Feel





Initial Assessment (Primary Survey)

- Breathing
 - Oxygenate immediately if:
 - ◆ Decreased level of consciousness
 - ◆ Shock
 - ◆ Severe hemorrhage
 - ◆ Chest pain
 - ◆ Chest trauma
 - ◆ Dyspnea
 - ◆ Respiratory distress
 - ◆ Multi-system trauma



Initial Assessment (Primary Survey)

Circulation

Is the heart beating?

Is there serious external bleeding?

Is the patient perfusing?

How do we know?



Initial Assessment (Primary Survey)

- Disability (CNS Function)
 - Decreased LOC =
 - ♦ Brain injury
 - ♦ Hypoxia
 - ♦ Hypoglycemia
 - ♦ Shock
 - **NEVER** think drugs, alcohol, or personality first



Initial Assessment (Primary Survey)

- Expose and Examine
 - You can't treat what you don't find!
 - If you don't look, you won't see!
 - Remove ALL clothing from critical patients ASAP
 - Avoid delaying resuscitation while disrobing patient
 - Cover patient with blanket when finished

Initial Assessment (Primary Survey)

A blood pressure or an exact respiratory or pulse rate is NOT necessary to tell that your patient is critical !!!!!



Primary Resuscitation

Never delay transport of a critical patient to
start an IV!!!



Secondary Survey(Detailed/Rapid Trauma)

- History and Physical Exam
- You WILL get here with MOST trauma patients
- Perform ONLY after primary survey is completed and life threats corrected
- Do NOT hold critical patients in field for secondary survey



Secondary Survey(Detailed/Rapid Trauma)

- Physical Exam
 - Stepwise, organized
 - Every patient, same way, every time
 - Superior to inferior; proximal to distal
 - Look--Listen--Feel



Secondary Survey(Detailed/Rapid Trauma)

- Physical Exam
 - Use your stethoscope
 - Listen to patient's chest
 - Most frequently missed areas
 - ◆ Back
 - ◆ Mouth
 - ◆ Neuro exam



Secondary Survey(Detailed/Rapid Trauma)

- Physical Exam
 - Assessment of extremities **MUST** include:
 - ◆ Pulses
 - ◆ Skin color
 - ◆ Skin temperature
 - ◆ Capillary refill
 - ◆ Motor function
 - ◆ Sensory function



Secondary Survey(Detailed/Rapid Trauma)

- History
 - Ample history
 - ◆ A = Allergies
 - ◆ M = Medications
 - ◆ P = Past medical history
 - ◆ L = Last oral intake
 - ◆ E = Events leading up to incident



Priorities

ABC

Airway – OK

Breathing ?

- Rate 32, sat 81%, ↓↓ AE Left
- Action?



Priorities in Trauma

- *High-Priority Areas*

- Airway/breathing
- Shock/external hemorrhage
- Impending cerebral herniation
- Cervical spine

- *Low-Priority Areas*

- Neurologic
- Abdominal
- Cardiac
- Musculoskeletal
- Soft tissue injury



Definitive Care

- Reevaluation en route
 - Ventilation and perfusion status
 - Vital signs every five minutes
 - Continued management of identified problems
 - Continued reassessment for unidentified problems



Adjuncts and tests

Adjuncts

- Pulse oximeter
- Cardiac monitor
- Foley catheter
- NG tube

Diagnostic tests

- CXR
- Pelvic x-ray
- C-spine x-ray
- EKG
- Pregnancy test
- Labs



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