Management of Polytrauma Patient

During a Multiple Casualties Incident

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Injuries that involve more than one body Systems

- Respiratory
- Cardiovascular/Circulatory
- Nervous
- Musculoskeletal
- Digestive/Gastrointestinal
- Skin/integumentary

Example of polytraumatized patient:

- Head trauma
- Chest wall trauma
- Spleen trauma
- Femur fracture

- **Isolated trauma**

- **Example – simple calcaneal fracture without eternal bleeding**

Surrounding Environment

- Security of the medical team
- Stability of environment
- Proper lighting
- Adequate ventilation
- Security of communication

Red flags indicating severe injury of patient deterioration

- Fumes
- Electrical cables
- Harmful fluids

The "Golden Hour" or "Golden Period"

Is the time dealing with an injury up to its definitive treatment and relates to an injured patient.

This time has a critical period which is referred as Golden Hour.

During a Multiple Casualties Incident (MCI) the priority is to save the maximum number of injured

Polytrauma Evaluation

- Airway
- Breathing
- Circulation with hemorrhage control
- Disability-Neurological evaluation

This sequence ensures the ability of the red blood cell to circulate and deliver oxygen to the tissues

Three are the elements necessary for normal physiology

- Red blood cell (RBC) oxygenation
- RBC transfer
- Oxygen release

- **The primary evaluation targets:**

  - **Breathing – Ventilation**
  - **Blood Circulation – Bleeding**

- # Airway management

Manual methods (jaw trust)

Mechanical ways such as,

- **Intubation**

Cervical Spine Immobilization

- **Manually**
- **Brace**

Breathing

Rhythm
Apnea – non viable

- slow < 12/min

- **Normal 12 – 20/min**
  Supplement O2

- **Fast 20 – 30/min**

  Results in to CO_2 accumulation

  Supplement O2 until reason is established

- **Very fast >30/min**

  Hypoxia – anaerobic metabolism

  Supplement O2

Circulation

Hemorrhage

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Hemorrhage Control

- Direct pressure
- Tourniquet

Hemorrhage Control

- Mental State
- Pulse
- Skin color
- Temperature
- Capillary return

Neurologic Evaluation

Glasgow Coma Scale
G.C.S

- Eye response
- Verbal response
- Motor response

Reminder of G.C.S

Maximum Score G.C.S 15

- G.C.S. <8 Severe
- G.C.S. 9-12 Moderate
- G.C.S. 13-15 Minor

G.C.S. < 8

Emergency Airway Management

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Environment

Only the absolutely necessary body parts are exposed

Environment

- **Beware of Hypothermia**
- **Patient must be warm**

All the above guide us to the STAR TRIAGE

STAR TRIAGE

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- **Breathing 30/min**
- **Circulation 2΄**

Mental state:
Can follow simple commands

THIS IS THE POLYTRAUMA PATIENT THAT CAN SURVIVE

If patient can follow simple commands he/she is considered viable.

Mental State

- If there is radial pulse but cannot follow commands

Continue support with good chance of survival

No radial pulse and capillary refill (nail pressure test) > 2΄΄

Hemorrhage Control
Possible Survival

Fast evacuation and transfer

No radial pulse and and capillary refill (nail pressure test) > 2΄΄

Mental State
Does not follow simple commands.

Evaluate evacuation time and decide transfer

Capillary Refill < 2΄΄

Mental state
Follows commands.

Evacuate and continue support

Dangerous Syndromes

With low survival rate due to increased evacuation time

- **ARDS (Respiratory destress)**
- **Crush Syndrome**

ARDS

- Pneumothorax open
- Pneumothorax closed

Mechanical Respiratory Support

Crush

- Evacuation with bleeding control
- Load with iv fluids to avoid possible renal failure

When to STOP CPR?

This basic knowledge should allow us to evaluate,

- **The survivors**
- **The one who could survive with appropriate treatment.**

THIS IS THE REALITY OF Multiple Casualties Incidence

THANK YOU

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