Lecture7

Burns

***Burn**: Burn wounds occur when there is contact between tissue and an energy source, such as heat, chemical, electrical current or radiation.*

Injury to skin which result in loss have problems with:

1. *Infection*
2. *Inability to maintain normal fluids balance*
3. *Inability to maintain body temperature*

Skin layers:

1. *Epidermis*
2. *Dermis*

Types of burns injury according to causative agent:

1. *Thermal burns: flame, flash and contact with hot objects*
2. *Scald burns: hot fluids*
3. *Chemical burns: necrotizing substances (acid and alkaline)*
4. *Electrical burns: intense heat from an electrical current*
5. *Cold thermal injury: frostbite*

Classification of burns injury according to severity:

Severity is determined by:

1. *Depth of burn*
2. *Extend of burn calculated in percent of total body surface area (TBSA)*
3. *Anatomical location of the burn*
4. *Time*

5. *The causative agent/ presence of concomitant or/and inhalation injury*
6. *Patient risk factors*
7. *Age of patient*

The depth of burn depends on:

1. *The temperature of the injuring agent*
2. *The duration of exposure to the injuring agent*
3. *The areas of the body that are exposing to the injuring agent*

Classification of burns according to the depth

1) 1st degree (superficial burn)

- *Involve the epidermis*
- *Characterized by redness*
- *Sever pain*
- *Increase warmth*
- *Edema may occur but no blistering*

Example/ sunburn usually heal in 7 days

2) 2nd degree (partial thickness burn)

- *Involve epidermis and minimal dermis*
- *Usually caused by (flash and hot liquid)*
- *Moist, shiny appearance*
- *Salmon pink to red color*
- *Painful*
- *Usually heal in 21-29 days*
- *Leave minimal scaring*

3) 3rd degree (full thickness burn)

- *Involve both epidermis and dermis are destroyed with burning into s.c fat, may involve connective tissues, muscles, bone.*
- *Caused by sustained flame, electrical, chemical and steam.*

- *Thick, dry appearance.*
- *Pearly gray or charred black color.*
- *Painless because the nerves endings are destroyed.*
- *Pain is due to intermixing of 2nd degree.*
- *Maybe minor bleeding.*
- *Cannot heal and require grafting.*

Location of burn

Vital organs of burn:

1. *Face and neck*
2. *Chest*
3. *Perineum*
4. *Hands*
5. *Joint regions*

Signs 0f septic shock:

1. *Hypotension*
2. *Hypoxia*
3. *Decrease pulmonary compliance*
4. *Renal failure or hepatic dysfunction*

NOTES

- *Most of burns occur in winter more than summer.*
- *Burn injury often is not possible to predict the exact depth of a burn in the acute phase. Some 2nd degree burns will covert to 3rd degree when infection sets in. When in doubt call 3rd degree.*
- *The most common causes of death in burn pt. after the first 7 days is infection.*
- *Fluids …. Ringer lactate or other fluids flushes out kidneys, the pt.*

needs 75-100 cc/hr. until urine sample clear.