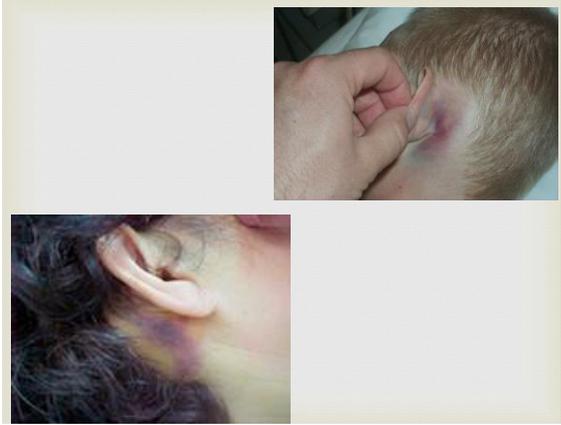
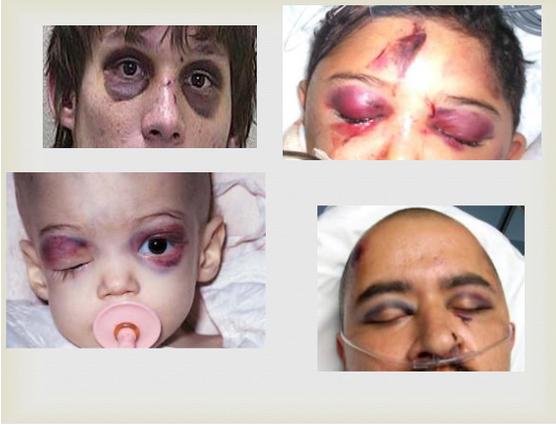


Neurologic Trauma

R.Thomas

- ## Head Injury
- Primary injury
 - Secondary injury
 - Scalp wounds
 - Skull fractures
 - Basilar skull fractures
 - Bleeding
 - Battle's sign
 - CSF leak





Brain Injuries

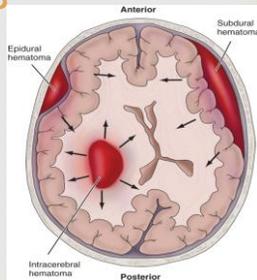


- ☞ Closed brain injury
- ☞ Open brain injury
- ☞ Concussion
- ☞ Contusion
- ☞ Diffuse axonal injury

Cerebral Hemorrhage



- ☞ Epidural
- ☞ Subdural
 - ☞ Acute/ subacute
 - ☞ Chronic
- ☞ Intracerebral



Management/Treatment

- ❧ Airway
- ❧ Prevent injury
- ❧ NG Tube
- ❧ Fluid & electrolyte
- ❧ Pain
- ❧ Anxiety
- ❧ Nutrition
- ❧ Daily Weights
- ❧ Maintain body temperature
- ❧ Family support

Collaborative Problems and Potential Complications #1

- ❖ Decreased cerebral perfusion
- ❖ Cerebral edema and herniation
- ❖ Impaired oxygenation and ventilation
- ❖ Impaired fluid, electrolyte, and nutritional balance
- ❖ Risk of posttraumatic seizures

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Nursing Process: The Care of the Patient With Brain Injury—Planning

- ❖ Major goals may include:
 - Maintenance of patent airway and adequate CPP
 - Fluid and electrolyte balance
 - Adequate nutritional status
 - Prevention of secondary injury
 - Maintenance of normal temperature
 - Maintenance of skin integrity
 - Improvement of cognitive function
 - Prevention of sleep deprivation
 - Effective family coping
 - Increased knowledge about rehabilitation process
 - Absence of complications

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Spinal Cord Injury



- ❧ Etiology
- ❧ Primary/ Secondary injury
- ❧ Spinal shock
- ❧ Neurogenic shock
- ❧ Autonomic Dysreflexia

Spinal and Neurogenic Shock

- ❖ Spinal shock
 - A sudden depression of reflex activity below the level of spinal injury
 - Muscular flaccidity, lack of sensation and reflexes
- ❖ Neurogenic shock
 - Caused by the loss of function of the autonomic nervous system
 - Blood pressure, heart rate, and cardiac output decrease
 - Venous pooling occurs because of peripheral vasodilation
 - Paralyzed portions of the body do not perspire

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Autonomic Dysreflexia

- ❖ **Acute emergency!**
- ❖ Occurs after spinal shock has resolved and may occur years after the injury
- ❖ Occurs in persons with SC lesions above T6
- ❖ Autonomic nervous system responses are exaggerated
- ❖ Symptoms include severe pounding headache, sudden increase in blood pressure, profuse diaphoresis, nausea, nasal congestion, and bradycardia
- ❖ Triggering stimuli include distended bladder (most common cause), distention or contraction of visceral organs (e.g., constipation), or stimulation of the skin

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Nursing Interventions

- ❖ Place patient in seated position to lower BP
- ❖ Rapid assessment to identify and eliminate cause
 - Empty the bladder using a urinary catheter or irrigate or change indwelling catheter
 - Examine rectum for fecal mass
 - Examine skin
 - Examine for any other stimulus
- ❖ Administer ganglionic blocking agent such as hydralazine hydrochloride (Apresoline) IV
- ❖ Label chart or medical record that patient is at risk for autonomic dysreflexia
- ❖ Instruct patient in prevention and management

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S/S of Spinal Cord Injuries



- ❖ Spinal shock
- ❖ Tetraplegia/ Quadriplegia
- ❖ Paraplegia
- ❖ Central cord syndrome
- ❖ Anterior cord syndrome
- ❖ Lateral cord syndrome (Brown-sequard syndrome)

Pharmacological Therapy



- ❖ Corticosteroids
- ❖ Antibiotics
- ❖ Sedatives
- ❖ Stool softeners

Spinal Immobilization



Nursing Process: The Care of the Patient With SCI—Diagnoses

- ❖ Ineffective breathing pattern
- ❖ Ineffective airway clearance
- ❖ Impaired physical mobility
- ❖ Disturbed sensory perception
- ❖ Risk for impaired skin integrity
- ❖ Impaired urinary elimination
- ❖ Constipation
- ❖ Acute pain

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Nursing Process: The Care of the Patient With SCI—Planning

- ❖ Major goals may include:
 - Improved breathing pattern and airway clearance
 - Improved mobility
 - Improved sensory and perceptual awareness
 - Maintenance of skin integrity
 - Promotion of comfort
 - Absence of complications

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