Identification & management of Stroke

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Stroke CNS

ST JAMES'S hospital

Spatial–Perceptual Alterations

- Spatial-perceptual problems may be
  - Incorrect perception of self and illness
  - perception of self in space
  - Inability to recognize an object by sight, touch, or hearing
  - Inability to carry out learned sequential movements on command

elimination

- Most problems with urinary and bowel elimination occur initially and are temporary.
- When a stroke affects one hemisphere of the brain, the prognosis for normal bladder function is intact
  - partial sensation of bladder and voluntary urination is present
  - Initially, the patient may experience frequency, urgency, and incontinence.
- Constipation is associated with immobility, weak abdominal muscles, dehydration, and diminished response to the defecation reflex.

prevention

- Antiplatelet drugs are usually the chosen treatment
    - Aspirin is the most frequently used as antiplatelet agent.
    - Common dose for aspirin is 300mgs x14 days,75mgs there after
    - Clopidogrel 75mgs higher CV risk or aspirin intolerant,Hx GI upset
    - DAPT
- Oral anticoagulation using NOAC (Apixiban SJH) is the treatment of choice for individuals with Non valvular atrial fibrillation.

Acute care

- Goals for collaborative care during the acute phase are
  - Preserving life
  - Preventing further brain damage
  - Reducing disability
- Begins with managing the ABCs
  - Airway
  - Breathing
  - Circulation

Acute care

- Causes
  - Sudden vascular compromise causing disruption of blood flow to the brain
  - Thrombosis
  - Trauma
  - Aneurysm
  - Embolism
  - Hemorrhage

Acute care

- Watch for hypertension post stroke.
  - Drugs to lower BP are used only if BP is markedly increased – Iv labetalol
- Fluid and electrolyte balance must be controlled carefully.
  - Adequate hydration promotes perfusion and decreases further brain injury.
  - Overhydration may compromise perfusion by increasing cerebral edema.

Acute care

- Interventions
  - Monitor vital signs and neurologic status.
    - Level of consciousness
    - Monitor sensory function
    - Pupil size and reactivity
    - O_2 saturation
    - Cardiac rhythm

Nursing Assessment

- If the patient is stable, obtain
  - Description of the current illness with attention to initial symptoms
  - History of similar symptoms previously experienced
  - Current medications
  - History of risk factors and other illnesses
  - Family history of stroke or cardiovascular disease

Nursing Assessment

- Comprehensive neuro examination
  - Level of consciousness
  - Cognition
  - Motor abilities
  - Cranial nerve function
  - Sensation
  - Deep tendon reflexes

Nursing management

- Risk for ineffective cerebral tissue perfusion
- Ineffective airway clearance
- Impaired physical mobility
- Impaired verbal communication
- Impaired urinary elimination
- Impaired swallowing
- Situational low self-esteem

planning

- Goals are that the patient will
  - Maintain stable or improved level of consciousness
  - Attain maximum physical functioning
  - Maximize self-care abilities and skills
  - Maintain stable body functions
  - Maximize communication abilities.
  - Avoid complications of stroke.
  - Maintain effective personal and family coping.

Nursing implementation

- Health promotion
  - To reduce the incidence of stroke, the nurse should focus teaching toward stroke prevention.
    - Particularly in persons with known risk factors
    - Education about hypertension control and adherence to medication
  - Teaching patients and families about
    - Early symptoms
      - Stroke
      - TIA
    - When to seek health care for symptoms

Nursing implementation

- Speech, comprehension, and language deficits are the most difficult problem for the patient and family.
- Speech therapists can assess and formulate a plan to support communication.
- Nurses can be a role model for patients with aphasia.

Nursing implementation

- Respiratory system
  - Management of the respiratory system is a nursing priority.
  - Risk for atelectasis
  - Risk for aspiration pneumonia
  - Risks for airway obstruction
  - May require tracheal intubation and mechanical ventilation

Nursing implementation

- Musculoskeletal system
  - Goal is to maintain optimal function.
  - prevention of joint contractures and muscular atrophy
  - range-of-motion exercises and positioning are important.
  - Paralyzed or weak side needs special attention when positioned.
  - Avoidance of pulling the patient by the arm to avoid shoulder displacement
  - Hand splints to reduce spasticity

Nursing implementation

- Skin integrity
  - Susceptible to breakdown related to
    - Loss of sensation
    - Decreased circulation
    - Immobility
  - Compounded by patient age, poor nutrition, dehydration, edema, and incontinence
  - Pressure relief by position changes, special mattresses, or wheelchair cushions
  - Good skin hygiene
  - Early mobility
  - Position patient on the weak or paralyzed side for only 30 minutes.

Nursing implementation

- Gastrointestinal system
  - Stress of illness.
  - Constipation.
  - Patients may be placed on stool softeners.
  - Physical activity promotes bowel function.
- Urinary system
  - promote normal bladder function.
  - Avoid the use of indwelling catheters.

Nursing implementation

- Nutrition
  - Nutritional needs require quick assessment and treatment.
  - May initially receive IV infusions to maintain fluid and electrolyte balance
  - May require nutritional support
  - First feeding should be approached carefully.
    - Test swallowing, chewing, gag reflex, and pocketing before beginning oral feeding.
  - Feedings must be followed by oral hygiene.

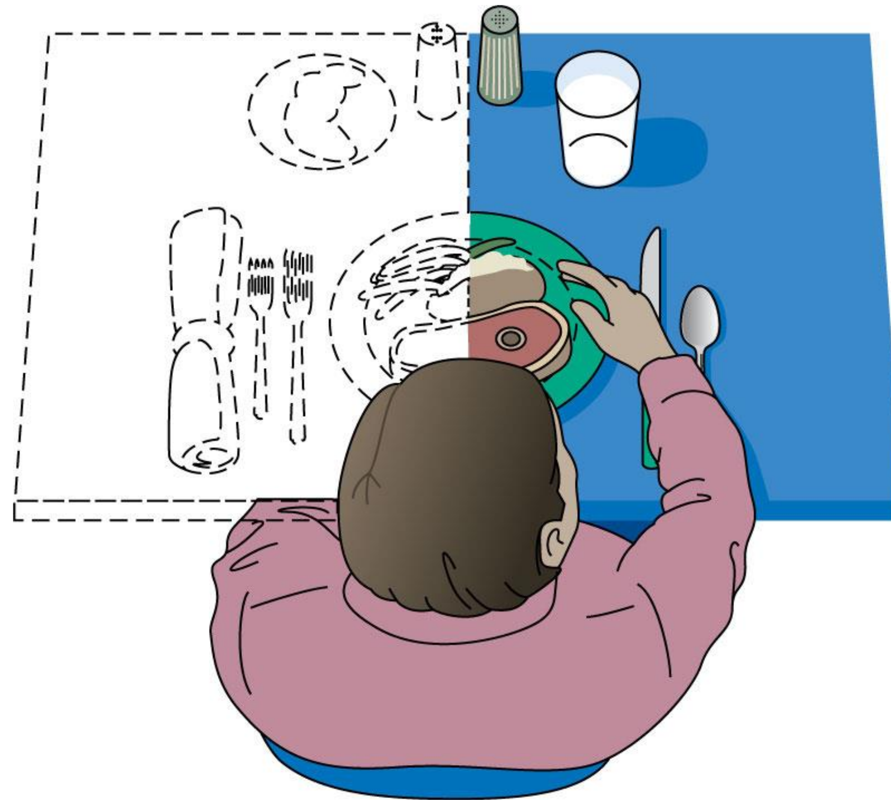
Nursing implementation

- Communication
  - Nurse's role in meeting psychologic needs of the patient is primarily supportive.
  - Patient is assessed for both the ability to speak and the ability to understand.
  - Speak slowly and calmly, using simple words or sentences.
  - Gestures may be used to support verbal cues.

Nursing implementation

- Sensory-perceptual alterations
  - Blindness in same half of each visual field is a common problem after stroke.
    - Known as homonymous hemianopia
    - A neglect syndrome (decrease in safety, increase risk for injury)
  - Other visual problems may include
    - Diplopia (double vision)
    - Ptosis (drooping eyelid)

Homonymous Hemianopia

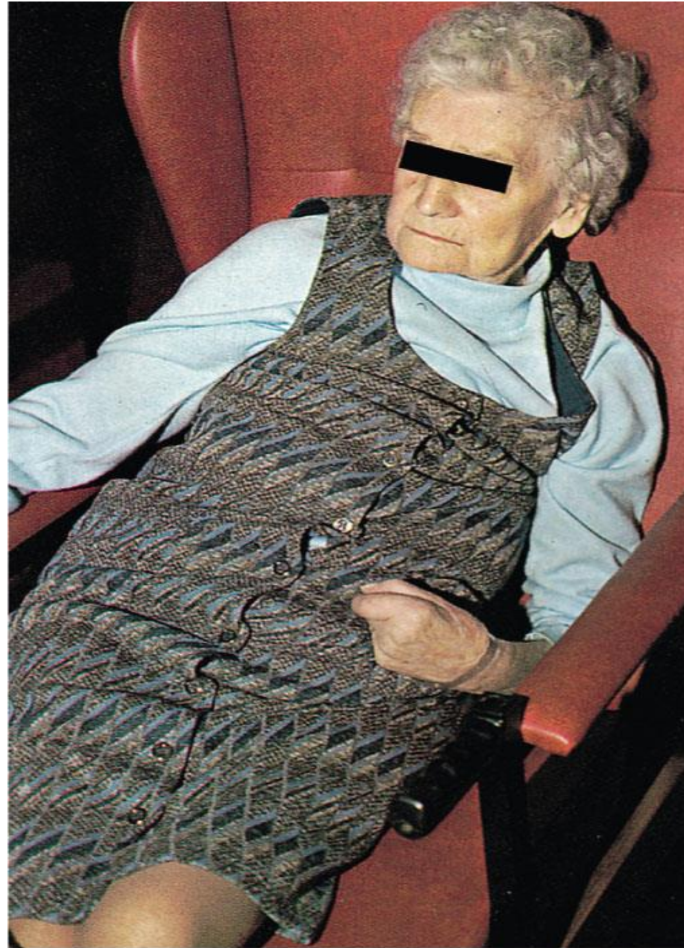


Modified from Hoeman SP: *Rehabilitation nursing*, ed 2, St Louis, 1995, Mosby.

Nursing implementation

- Coping
  - Affects family
    - Emotionally
    - Socially
    - Financially
  - Changing roles and responsibilities
  - Explain
    - What has happened
    - Diagnosis
    - Therapeutic procedures
      - Should be clear and understood by patient.
      - social work referral is often helpful.

Loss of Postural Stability



From Forbes CD, Jackson WF: *Color atlas and text of clinical medicine*, ed 3, London, 2003, Mosby.

Assistive Devices for Eating

- **A -** The curved fork fits over the hand. The rounded plate helps keep food on the plate. Special grips are helpful for some persons.
- **B -** Knives with rounded blades are rocked back and forth to cut food. The person does not need a fork in one hand and a knife in the other.
- **C -** Plate guards help keep food on the plate.
- **D -** Cup with special handle.

Courtesy Sammons Preston, Bolingbrook, Ill.

compassion

- Patients with a stroke may be coping with many losses
  - Often go through the **process of grief**
  - Some patients experience long-term depression
  - **Support communication between the patient and family.**
  - Discuss **lifestyle changes.**
  - Discuss changing roles within the family.
  - Be **an active listener**.
  - Include family in goal planning and patient care.
  - Support family conferences.

Stroke terminology

- Aphasia - Difficulty understanding what is said, finding the words and putting words in sentences, and difficulty reading and writing words or sentences
- Dysarthria - Difficulty saying words clearly due to problems with muscle strength and coordination
- Dysphagia - Difficulty with swallowing
- Hemiparesis - Weakness on one side of the body
- Hemiplegia - Complete paralysis on one side of the body