Tikrit University

College of Nursing

Clinical Nursing Sciences



Third Year - 2023-2024

Child Health Nursing



(Meningitis)

by:

Professor of Pediatrics Ashoor R Sarhat

Meningitis

- 1. inflammation of meninges,
- 2. most common infectious process of the CNS.
- 3. bacterial or viral

Meningitis

- 1. Primary disease or
- 2. Secondary

Complications of neurosurgery

Trauma,

Systemic infection,

Sinus infections

Ear infections

Etiology

- 1. H. influenzae type b (Most common cause of meningitis in children older than age 1 month.
- 2. Neisseria meningitidis
- 3. Streptococcus pneumoniae are common bacterial causes of meningitis.

Bacteria reach the meninges via

- 1. Bloodstream from nearby infections (Sinusitis, mastoiditis, otitis media) or
- 2. Communication of CSF (an excellent medium for bacterial growth).

Clinical manifestation among infants and toddlers include:

- 1. fever
- 2. change in feeding pattern
- 3. vomiting or diarrhea
- 4. bulging anterior fontanel
- 5. irritability
- 6. high-pitched cry
- 7. seizures
- 8. lethargy
- 9. confusion

10.muscle or joint pain

11.headache

Child with common neurological disorders

- 1. photophobia
- 2. nuchal rigidity (resistance to neck flexion)
- 3. opisthotonos (hyperextension of the head and neck to relieve discomfort)
- 4. seizures
- 5. coma
- 6. positive Kernig's or Brudzinski's sign, or both.

Kernig signs (flexion of the hip to 90 degree with subsequent pain on extension of the leg)

Diagnostic tests:

- ❖ Lumbar puncture (CSF assessment for
- 1. protein
- 2. glucose levels
- 3. Number of WBCs.
- 4. The fluid may appear cloudy or milky white.
- 5. CSF protein levels tend to be high; glucose levels may be low.
- **❖** CT scan or MRI
- **❖** Blood cultures
- Complete blood count (CBC)
- Serum electrolytes and osmolality
- Clotting factors
- Nose and throat cultures.

Complications

- 1. Hearing loss
- 2. Neurologic deficit,
- 3. Seizures,
- 4. Visual impairment,
- 5. Behavioral problems.

- 6. CN dysfunction,
- 7. brain abscess,
- 8. syndrome of inappropriate antidiuretic hormone (SIADH).
- 9. Death occurs in 10% to 15% of cases.

Treatment of bacterial includes the following:

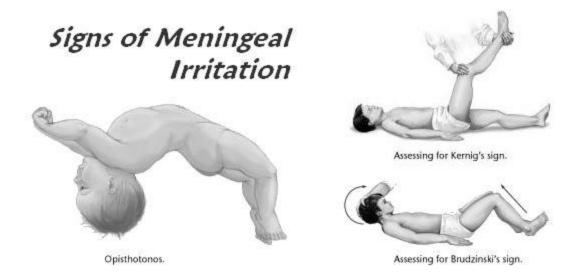
- 1. Two broad spectrum antibiotics.
- 2. Blood culture and sensitivity.
- 3. dexamethasone (Decadron) reduce risk of sequelae like hearing loss and neurologic complications.
- 4. Isolation of the child to prevent spreading the infection.
- 5. Medications to control fever and pain/discomfort.

Treatment for viral (aseptic) meningitis is

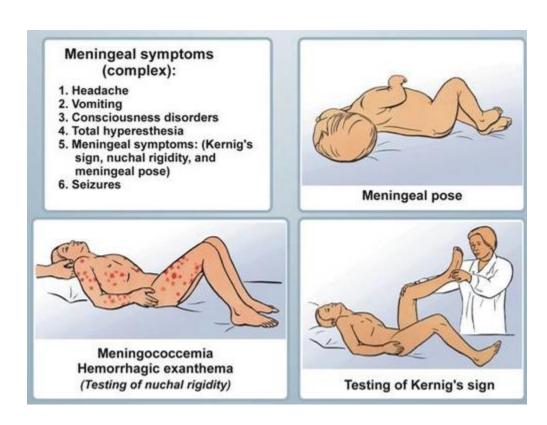
- 1. supportive;
- 2. medications like analgesics

Nursing interventions include:

- 1. Assess child's Neurological status and vital signs every 2 to 4 hour
- 2. Assess the patient for headaches, hearing loss, seizure, change in food and fluid intake.
- 3. Assess peaks of antibiotic levels to prevent ototoxicity.
- 4. Educate family on meningitis complications and medications
- 5. Control of pain by comfortable position and quiet environment,
- 6. Control of seizure
- 7. Help child and family during lumber puncture procedure



Meningeal irritation signs



Signs & symptoms of meningitis