

POLIOMYELITIS

- Acute, highly infectious diseases.
- Feco-oral route
- Affects intestine & CNS mainly spinal cord (1%).
- Sudden onset of fever, associated with constitutional signs & symptoms followed by the rapid onset of lower motor neuron type of paralysis (group of muscles or a limb)

Magnitude of problem

- 1994- Western countries got free from polio.
- India

2002- 1600 cases

2003- 225 cases

2004- 28 cases

Agent:

- RNA virus (Enterovirus)
- Three types of polio virus
- Type 1 – 80- 90% cases
- Inactivated by heat , U V radiations, formalin, chlorine, drying.
- Survive for years at sub zero temp.
- Reservoir- human being (active clinical case, carrier)
- Infective material- faeces
- Period of infectivity

Host

- Age – 6 mths to 3 yrs.
- Sex – Male: Female = 3:1
- Immunity: Maternal Ab, subclinical infections

Environment

- June to September
- Overcrowding, poor sanitation and contamination of food and water.

Risk factors

- Painful i/m injections- during the stage of viremia
- Fatigue
- Trauma
- Surgery in head & neck region

Mode of transmission: droplet infection, feco-oral transmission

Pharynx



Tonsillo-pharyngeal tissue/ Intestinal wall



Regional LN



Circulation (viremia)

Clinical Spectrum

- 95% - subclinical infections (asymptomatic)
- 04%- mild, self limiting, non specific febrile illness (abortive poliomyelitis)
- 01%- paralytic poliomyelitis
- Paralytic poliomyelitis- fever, headache, vomiting, malaise & anorexia
- Severe myalgia
- Asymmetrical distributed lower motor neuron type of flaccid paralysis
- No sensory loss
- Deep tendon reflexes are diminished or absent

- Polioencephalitis
- Bulbar poliomyelitis- paralysis of pharynx
- Diagnosis- Isolation of virus from stool, rise in titre of complement fixing antibodies.

Management

- Isolation
- Disinfection of saliva & excreta- 10% cresol
- Bed rest
- Expert nursing care
- Symptomatic treatment
- Prophylactic antibiotic
- No message/ injection
- Supportive treatment
- Maintenance of fluids & electrolyte balance
- Physiotherapy

Prevention & Control

- Immunization
 - 1 Active Immunization
 - 2. Passive Immunization
- Inactivated polio vaccine
 - Killed by formalin
 - 4 doses
 - Merits
 - Demerits
- Oral polio vaccine
 - composition
 - route
 - schedule

- Mechanism of protection
- Advantages
- Contraindication
- VVM

- *Eradication of polio*
- *Strategies in India*
 1. Pulse polio immunization
 2. Strengthen routine immunization
 3. Improve surveillance
 4. Rapid investigation
 5. Follow up
 6. Out break control
 7. Line listing
 8. Mopping up