Meningitis

Clinical Practice Guideline for Northern/Remote Settings

Meningitis is a life-threatening illness that is common in infants and children in the north. To diagnose meningitis, a high level of suspicion is needed. Every child with a fever, vomiting, lethargy and/or irritability needs to be checked for neck stiffness (and a bulging fontanelle if less than 9 months). Other possible symptoms and signs include tachypnea, apnea, poor feeding, altered sleep pattern, rash and seizures. Some children with meningitis, especially those < 6 months, may not have neck stiffness or a bulging fontanelle.

Diagnose Early	Check for neck stiffness in every child with fever, vomiting and irritability
Do Lab Work	Collect all specimens possible prior to starting antibiotics, e.g. CBC and diff, cultures of urine, blood, throat, and CSF when possible. However, DO NOT DELAY antibiotic administration if unable to obtain specimens in a timely fashion.
Start Treatment	Give antibiotics early – see table below
Evacuate	Discuss patient transport with a physician prior to evacuation, including: oxygen needs, need for intubation, and anticonvulsant treatment**.**

Empiric Antibiotic Therapy

Age less than 1 month *GBS, E. coli, Listeria, S. pneumoniae*	**1 – 3 months** *GBS, Listeria, S. pneumoniae, H. influenzae*	**3 mo. – 14 yrs.** *S. pneumoniae, N .meningitidis, H. influenzae*
Ampicillin 100 mg/kg/dose, q8h IV or IM **AND** **Gentamicin** 2.5 mg/kg/dose, q8h IV or IM (babies less than 7 days should get Gentamicin q12h)	**Ampicillin** 50 mg/kg/dose, q6h, IV or IM **AND** **Ceftriaxone** 75 mg/kg stat IV or IM, then 40 mg/kg/dose q12h. (*alternative:* Cefotaxime 50 mg/kg/dose, q6h, preferred if hyperbilirubinemia).	**Vancomycin** 15 mg/kg/dose, q6h IV (maximum 2 g / day) **AND** **Ceftriaxone** 100 mg/kg stat, IV or IM. Repeat the dose of 100 mg/kg at 12h and 24h, and then 100 mg/kg every 24 h. (Maximum dose = 4 g / day)

Notes:

1. The intravenous route is preferred. Where indicated in the above table, the IM route can be used if IV access is problematic.
2. The use of dexamethasone is controversial and only infrequently indicated. Discuss with MD.
3. An LP should NOT be performed in a child who is unstable from a respiratory, neurologic, or hemodynamic viewpoint, as the stress of the procedure may worsen the child's condition.
4. For the 3 mo. – 14 year age group, IF a lumbar puncture is done and a rapidly done gram stain shows there are no gram positive cocci, vancomycin can be omitted. This will be an uncommon situation in northern health centres.

This is circulated to you as a recommended approach to care, and is consistent with standards of care at the Children's Hospital of Winnipeg. Ultimate decisions regarding treatment must be individualized.

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