

Be Alert for Rising Rates of Bacterial Meningitis

A recent CDC health advisory warns about the highest number of bacterial meningitis cases in nearly 10 years.

About 1 in 5 of these cases will be fatal.

Most are caused by *Neisseria meningitidis* serogroup Y...and especially affect those who are 30 to 60 years old, Black or African American, or diagnosed with HIV.

Continue to stay alert for typical symptoms...neck stiffness, headache, fever, and altered mental status. But be aware that many of these new cases will present with bloodstream infections instead.

Ensure there are orders for blood cultures plus a lumbar puncture to assess cerebrospinal fluid (CSF). Suspect bacterial meningitis when CSF shows elevated WBCs and protein...plus decreased glucose.

Antibiotics. Start empiric IV antibiotics to cover likely culprits...especially *Streptococcus pneumoniae* and *Neisseria meningitidis*. Begin as soon as possible...delays are linked to worsening neurological outcomes and increased mortality.

Generally give vancomycin plus a third-generation cephalosporin (ceftriaxone, etc) for adults, kids, and infants at least a month old. Add ampicillin to cover *Listeria monocytogenes* in those over age 50.

Consider broader coverage in immunocompromised patients...such as vancomycin, ampicillin, and either cefepime or meropenem.

Give neonates ampicillin for empiric *Listeria* coverage...plus cefotaxime to cover *E. coli* and Group B strep. If you can't get cefotaxime due to shortages, consider ceftazidime or cefepime instead.

Try to avoid ceftriaxone in neonates...it can displace bilirubin and may lead to kernicterus.

Use our resource, Managing Beta-Lactam Allergies, for guidance on cross-reactivity when patients have a true, severe allergy.

Steroids. Be aware, steroid use in meningitis is controversial.

Consider adding empiric dexamethasone for adults with suspected bacterial meningitis to decrease risk of hearing loss. It may also decrease mortality...but only due to *S. pneumoniae*.

Individualize the decision in kids. For instance, consider dexamethasone in unvaccinated kids. It can decrease risk of severe hearing loss, but this is only for *H. influenzae* meningitis, which is less common due to vaccination.

When using dexamethasone, try to give the first dose just before or at the same time as the first antibiotic dose...so it's on board to curb the inflammatory response caused when bacteria are killed.

Stop dexamethasone if the culprit organism is *Listeria*. In this case, dexamethasone can worsen outcomes.

Ensure that patients at risk get vaccinated to prevent meningitis. For example, vaccinate those with asplenia or HIV.

Key References:

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