

ASPIRES tidbits:

ASPIRATION PNEUMONIA: Should We Always Be Using Pip-Tazo?

Aspiration pneumonia is a common clinical syndrome that often requires consideration for treatment. Here are a few things to consider:

- Aspiration often causes “chemical pneumonitis,” which does not require antibiotics.**
“Chemical pneumonitis” is not an infectious process and is associated with an acute onset (several hours to 1 day) with classical symptoms of low-grade fever and pink, frothy sputum. In aspiration, the gastric acid, bile and other irritants cause an inflammatory process in the lung parenchyma, which can affect respiratory function. This may be accompanied by white blood cell elevations and chest x-ray changes despite an absence of infection. Treatment for this condition involves supportive care; not antibiotics.
- Treat patients with antibiotics only if they have symptoms of an infection.**
Aspiration pneumonia is a “bacterial super-infection” in the lung tissue at the site of aspiration. Patients with poor dentition are at highest risk for infection. Aspiration pneumonia can be distinguished from chemical pneumonitis by its relatively insidious onset (1-7 days), presence of fever, respiratory difficulty, elevated white blood cell count, and purulent (often foul-smelling) sputum. Symptoms of aspiration pneumonia and chemical pneumonitis may overlap, so clinical judgment must be used.
- Ceftriaxone monotherapy or amoxicillin-clavulanic acid are effective regimens.**
Community-acquired aspiration pneumonia usually involves mouth organisms, which include streptococci and oral anaerobes (*Fusobacterium*, *Peptostreptococcus*). These organisms are adequately covered by intravenous ceftriaxone or oral amoxicillin-clavulanate (for patients who can swallow or have feeding tubes allowing oral medication administration). In patients with particularly poor dentition, lack of stomach acidity (e.g. on proton pump inhibitors) or hospital-acquired disease, more resistant anaerobes may play a role, whereby either oral amoxicillin-clavulanic acid or a regime including metronidazole (e.g. ceftriaxone + metronidazole) should be used. *Pseudomonas* and resistant gram-negative rods are not generally present and thus piperacillin-tazobactam is not a recommended first-line drug for aspiration (see below for exceptions).
- Reserve piperacillin-tazobactam for patients at high risk of resistant organisms.** Piperacillin-tazobactam should only be considered for first-line therapy in patients at high risk for resistant organisms (i.e., repeated antibiotic courses, known resistant pathogens, prolonged hospital stay).
- Moxifloxacin is considered second-line therapy.**
Moxifloxacin should only be used in patients with allergies or other reasons where beta-lactam antibiotics are contraindicated. Moxifloxacin PO is the preferred route of administration as it achieves the same drug levels (bioavailability) as the IV route.