NH ANTIMICROBIAL STEWARDSHIP (AMS) PROGRAM

Antimicrobials - Handle with Care

Northern Health's AMS program would like to welcome Dr. Abu Hamour as the official Medical Lead for the AMS program and look forward to future collaboration! We would also like to share with our prescribers in Northern Health, an upcoming change to outpatient management of uncomplicated skin and soft tissue infections (see info below).

Cefazolin plus Probenecid

Previous practices in Northern Health (NH) for outpatient IV management of uncomplicated skin and soft tissue infections (uSSTI) relied on the use of cefazolin plus oral probenecid. In 2011, probenecid was removed from the Canadian Market. At that time, ceftriaxone replaced cefazolin plus probenecid in the outpatient setting for uSSTI. This is not an ideal practice because ceftriaxone has suboptimal activity against S. aureus, has a higher risk for developing C. difficile infection and provides unnecessary gram negative coverage promoting antimicrobial resistance.

Probenecid given orally prior to a once daily dose of cefazolin 2 g IV has been shown to increase serum concentrations and extend the half-life of cefazolin in a manner that achieves clinical resolution of cellulitis and related soft tissue infections compared to treatment with ceftriaxone 2 g IV daily. Prescribing cefazolin 2 g IV q24h plus probenecid 1 g PO daily 10 to 30 min prior to cefazolin in outpatient treatment settings for uSSTI will minimize use of ceftriaxone for uSSTI in outpatient treatment settings. However there will still be situations that warrant use of ceftriaxone in the outpatient setting (e.g. complicated infections such as: bone and joint infection, endocarditis, moderate/severe diabetic foot ulcers and animal bites)

Note that probenecid is contraindicated in patients with renal dysfunction and should not be used in patients with a creatinine clearance (CrCl) of less than 30 mL/min. Patients with CrCl of less than 30 mL/min could be treated with cefazolin at a reduced frequency (see below).

Creatinine Clearance (mL/min)	Cefazolin dosing
10 – 30	Cefazolin 2 g IV q 12h (no probenecid)
Less than 10	Cefazolin 2g IV q 24h (no probenecid)
Hemodialysis	Cefazolin 2 g IV after dialysis 3 x/week (no probenecid)

There is a Canadian manufacturer in Quebec that is now compounding probenecid capsules. Several other Health Authorities (HA) in Canada (including BC) are currently ordering from this manufacturer. The probenecid product being compounded is not available via community pharmacies (manufacturer will only sell to hospital pharmacies); therefore NH facilities will be required to provide patients with this oral medication. Providing patients with oral probenecid daily (when patient returns for cefazolin dose) will prevent any wastage, specifically in situations of undetermined duration of therapy; also probenecid should be taken 10 to 30 min prior to the cefazolin dose. If patients require a split dose twice daily to minimize GI side effects, compliance will have to be reinforced to ensure the 2nd dose is taken. As per NH policy 1-5-1-060: Dispensing medications by health care providers, registered nurses are able to dispense a home dose (if needed) from a wardstock bottle into a child-proof bottle with appropriate medication label for the patient to take home. Pharmacy departments will provide generic labels that can be filled in by nursing with patient specific information.

Probenecid will be available for prescribing May 1st, 2017. There is a regional order set under development for use of IV antimicrobials in the outpatient setting which will include this treatment option. Keep watch for future communications regarding this new order set; if you are interested in being a stakeholder for this order set please contact the program coordinator listed below.

For more information regarding the information listed above or about Northern Health's Antimicrobial Stewardship program, contact Alicia Rahier the program coordinator/lead pharmacist at 250-565-5956 or via email alicia.rahier@northernhealth.ca

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