Vancouver Coastal Health
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PHARMACY AND THERAPEUTICS NEWSLETTER

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Vancouver General Hospital, UBC Hospital, GF Strong

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In This Issue...

Additions

1. **Human Papillomavirus (HPV) Vaccine (Gardasil® 9)**
- Restricted at VA to patients who are 26 years or less with any of the following: HIV; Transgender; Men who have sex with men

Deletions

1. **Halothane liquid (Fluothane®)**

2. **Procyclidine (Kemadrin®)**
- Alternatives: Benztropine, Trihexyphenidyl

3. **Prophylthiouracil 100 mg tablets**
- Alternative: Methimazole

Updated Policies

1. METHOTREXATE LOW DOSE ONCE WEEKLY RESTRICTION

Reviewed with Dr Claire Harris, Nephrology

Methotrexate (MTX) is a disease-modifying anti-rheumatic drug (DMARD) that is often given orally at low doses once weekly for non-antineoplastic indications, such as rheumatoid arthritis, psoriasis and inflammatory bowel disease. MTX is primarily cleared through renal elimination (80-90% unchanged). Toxicity can occur in patients with reduced renal clearance, resulting in accumulation of MTX and serious adverse effects, including hepatotoxicity, stomatitis and myelosuppression.

Critical incidents have occurred where patients continued to receive low dose once weekly MTX during an acute kidney injury (AKI) episode and developed profound pancytopenia. To address this issue, the following restrictions to MTX use have been developed:

In-Patients

All hospitalized patients: MTX will be held on admission until dose confirmed

Pharmacy Procedure:
- Dispensary will NOT process any MTX orders for low dose, once weekly non-BMT/oncology, non-ectopic pregnancy indications
- Contact or flag for clinical pharmacist to assess
- If on a w/e or STAT – may wait until a weekday for clinical pharmacist to assess; if urgent, contact prescriber to confirm dose
- Note: since MTX remains intracellular for a prolonged period, postponing the weekly dose by 2-3 days should not be an issue.
- A MAR memo will be sent to ward stating: "Methotrexate NOT processed by pharmacy; clinical pharmacist to review with prescriber"

Decision to restart MTX should take into consideration:

i. **Assessment of patient factors to determine whether it is safe to continue MTX:**
- Renal function (see dosing recommendations as per outpatient section below)
- Concomitant drugs receiving in hospital (e.g. nephrotoxins, penicillins, PPIs, sulfonamides)
- Low serum albumin
- Urgency and need for medication restart - referral to appropriate Specialty for guidance and/or alternative therapies recommended

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ii. **Restart MTX if appropriate:**
- Once MTX is confirmed appropriate to be given, Pharmacy to be informed to dispense MTX
- Ensure patient is receiving folic acid 5 mg po daily (at least 6 days of the week)

iii. **HOLD MTX in hospital if**:
- Acute Kidney Injury: serum creatinine rise by 26 micromol/L *OR* by 1.5 times the baseline value (ie. 50% above baseline) within 48 hours

iv. **STOP MTX if:**
- Patient requires hemodialysis (HD), peritoneal dialysis (PD), Continuous Renal Replacement Therapy (CRRT)

Out-Patients

HD/ PD: Do not use MTX

CKD, eGFR less than 50 mL/min:
- Reduce MTX dose by 50%, maximum dose: 12.5 mg weekly
- Co-administer folic acid 5mg daily (at least 6 days of the week)
- Use with extreme caution in CKD, eGFR less than 30 mL/min

Any CKD patients with AKI:
- Hold MTX, contact prescriber

2. ALLERGY TESTING AND DELABELING

At VGH, penicillin and other drug allergy testing (by skin test and/or oral/IV challenge) for in-patient units are administered by:

Drug skin testing
i. Penicillin – performed by Allergy & Immunology Physicians, VGH ID/ASPIRES team, or L/BMT Physicians or Pharmacists with specialized training in penicillin drug testing
ii. Other medications – performed by Allergy & Immunology Physicians only

Intravenous (IV) challenge
i. Administered under supervision of Allergy & Immunology Physicians

Oral challenge
i. Administered by nurses, Allergy & Immunology Physicians, VGH ID/ASPIRES team, or L/BMT Physicians or Pharmacists with specialized training in allergy drug testing

Delabeling Practice Change to Update Patient Allergy Profile

Standardization of the delabeling of patients who have a negative drug allergy test in the PCIS system is essential to communicate the updated allergy status to healthcare providers.

When patients are allergy test negative (by skin test and/or oral/IV challenge), the allergy team will write an order for pharmacy to delabel (remove) the allergy from the PCIS profile.

Pharmacy will update the allergy status in PCIS as follows:
- Delete old drug allergy status
- Update drug allergy status
  - ⇒ **Penicillin Allergy Test Negative** (date) [previous wording was "Penicillin skin test negative"]
  - ⇒ **Sulfa Allergy Test Negative** (date)
  - ⇒ **Misc Drug Allergy Test Negative** - Drug Name (date)
- Prescriber/Clinical pharmacist will:
  - ⇒ Ensure the Allergy Assessment Form is updated by crossing out the drug allergy (e.g. ~~Penicillin rash~~ and write "Penicillin allergy test negative (date)
  - ⇒ Liaise with nurse to update patient allergy band
  - ⇒ Liaise with MRP to inform of change in allergy status (by Pharmacist)

3. DELAYED SEVERE SKIN ALLERGIC REACTIONS

Delayed severe skin allergic reactions include:
- Drug reaction with eosinophilia and systemic symptoms (DRESS)
- Stevens-Johnson syndrome (SJS)
- Toxic epidermal necrolysis (TEN)
- Acute general exanthematous pustulosis (AGEP)

At VGH, there have been 2 recent cases where patients with a documented delayed skin allergic reaction from a penicillin-type antibiotic were administered beta-lactam antibiotics (cephalexin and meropenem) which are contraindicated. Both patients received steroids and recovered.

Practice Change

For patients with a documented delayed skin reactions to any beta-lactam antibiotic, pharmacy will update the allergy status in PCIS and the Allergy Assessment form as follows:
- Example:
  - ⇒ **Penicillin - DRESS**
  - ⇒ **Penicillin Antibiotics - Avoid ALL beta-lactams due to DRESS**
  - ⇒ **Cephalosporin Antibiotics - Avoid ALL beta-lactams due to DRESS**
  - ⇒ **Carbapenem Antibiotics - Avoid ALL beta-lactams due to DRESS**

Pharmacy will:
- ⇒ liaise with nursing to update allergy band
- ⇒ provide patient education and suggest obtaining a Medic Alert bracelet