Guideline Resource Unit
guru@ahs.ca

Guideline Summary

Chemotherapy Induced Peripheral Neuropathy

Accompanies: Clinical Practice Guideline SUPP-010

Alberta Health Services
CancerControl Alberta

www.ahs.ca/guru

The assessment, prevention, rehabilitation and management strategies outlined in this summary and accompanying guideline apply to adult cancer patients with chemotherapy-induced peripheral neuropathy. Refer to the full clinical practice guideline for a detailed description of the clinical questions, recommendations, guideline development methodology, and references.

Assessment

- When a patient presents with neuropathic symptoms, first investigate and rule out alternative causes.
- Valid quantitative measures should be used to assess the severity of motor symptoms, sensory symptoms, and pain, including the NCI-CTCAE v5 (Nervous System Disorders) and ESASr (Pain) tools regularly as needed at each appointment.
- Patient reported outcome measures are important part of the assessment.

Prevention

- Ensure patients are aware of the following before starting a chemotherapy regimen:
    - Specific neurotoxic effects that can be expected.
    - Risk factors for CIPN, including prior chemotherapy, diabetes, folate/vitamin B12 deficiencies, history of smoking, and decreased creatinine clearance.
    - Certain chemotherapy drugs such as paclitaxel and nab-paclitaxel are associated with worsening of CIPN symptoms after completion of the last course of therapy.
    - Platinum neuropathy can progress for several months after completion of chemotherapy and can lead to permanent damage or limitations.
    - Signs and symptoms of platinum neuropathy that should be reported when they are first noticed.
    - Strategies for self-care and personal safety.

- Exercise and physical activity may have a protective effect, particularly for patients treated with taxanes, platinum drugs, or vinca alkaloids.

Rehabilitation

- CIPN rehabilitation referral criteria: Grade 2 CIPN (moderate pain and symptoms impacting instrumental activities of daily living) and/or subsequent to an unsuccessful trial of initial pharmacologic therapy options.
- Assessments and outcome measures: quantitative sensory testing, grip strength, DASH, functional task assessment, fine motor outcome measure, balance testing/assessment, gait assessment and general assessment of ADL (activities of daily living).
- Recommended interventions are specific to each patient and their symptoms, and may include: desensitization, sensory modification, gait aids, strengthening, and/or therapeutic exercises.
- Recommended complementary therapies include relaxation techniques.

Pharmacological Management

- Duloxetine is the only recommended first-line medication; the recommended dosing is 30 mg/day for the first week, then 60 mg/day thereafter, if well tolerated.
- The efficacy of the following agents is established for other forms of neuropathic pain, but evidence is limited for the treatment of CIPN: anticonvulsants (gabapentin or pregabalin), and tricyclic antidepressants (amitriptyline, nortriptyline, desipramine, or imipramine).
- Referral to a specialized pain management service is recommended for discussion of other add-on or alternative pharmacologic options.
- Individual patients and responses will vary, and every pain syndrome is unique, therefore the lack of evidence does not preclude reasonable attempts at symptom management.
- For patients with CIPN with changing or worsening symptoms:
    - Rule out other causes of peripheral neuropathy such as spinal cord compression.
    - Active chemotherapy treatment may require treatment delays or reductions until symptoms resolve.

Referrals and Follow-up

- Refer cancer patients and survivors experiencing CIPN as clinically indicated to: physiotherapist, occupational therapist, massage therapist, acupuncturist, patient and family counseling, pain and symptom management/palliative care, home health nursing, and/or neurologist.