Pharmacology of drugs in neurology

Learning outcome objectives
Upon successful completion of this lesson, you should be able to:
1. Recognize commonly seen neurological symptoms and diseases.
2. Describe an approach to pharmaceutical care of the neurological patient.
3. Describe the actions of select drugs used in the treatment of neurological conditions.
4. Recognize drug-related problems and concerns in neurological conditions, particularly associated with migraine headaches, Alzheimer’s disease and Parkinson’s disease.
5. List the goals of treatment for patients with migraine headaches, Alzheimer’s disease and Parkinson’s disease.
6. Explain the mechanisms of action of drugs used in these three conditions.
7. List and describe options used in the treatment of these three conditions.
8. Identify when dosage adjustments may be needed.
9. Identify important factors and characteristics that may be conveyed to patients to assist with choosing an individualized therapy.
10. Explain how to monitor drug therapy in neurological patients.
11. Manage common difficulties encountered in neurological conditions with the implementation of a therapeutic plan.
12. Describe a follow-up process for drug therapy in patients with neurological conditions.

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Alan Low is a pharmacotherapeutic specialist in neurology and ambulatory care. His patient practice includes private consultations for patients with neurological conditions such as Alzheimer’s disease, migraine, multiple sclerosis and Parkinson’s disease. Alan was previously the coordinator of the neurology section of the advanced therapeutics course (Pharm.D. Program, University of British Columbia [UBC]). He was the lead speaker in a major migraine education program presented in five cities in British Columbia.

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Elaine Chong received her degrees from UBC. She then completed a pediatric hospital pharmacy residency at the Hospital for Sick Children in Toronto. She is a board-certified pharmacotherapy specialist and has specialized training in primary healthcare research and population health. She has worked as a clinical manager and consultant in different disease areas, including neurology. Elaine is currently a postdoctoral research fellow at the Centre for Health Services and Policy Research at UBC.

Expert Reviewer: Kerry Wilbur, B.Sc.Pharm., ACPR, Pharm.D.
Kerry Wilbur is an assistant professor of pharmacy at Qatar University and founding chair of the QU Continuing Professional Pharmacy Development program. She was a
clinical pharmacy specialist in internal medicine at Vancouver General Hospital and clinical associate professor of pharmacy at UBC. In addition to determining and monitoring the use of appropriate drug therapy in geriatric patients afflicted with neurological disorders in her former hospital practice, she was involved in developing the CNS pharmacology module for paramedical professionals training at the Justice Institute of British Columbia.