Movement disorder toolbox

Robin Hieber, PharmD, BCPP

Assistant Professor of Pharmacy Practice
Midwestern University Chicago College of Pharmacy

KEYWORDS

Movement disorder, rating scales, policy

This toolbox starting on the next page includes several helpful documents regarding drug-induced movement disorders. A sample assessment policy is available as well as a handy reference chart. Sample assessment forms are available.

This toolbox will assist you in setting up a monitoring process for assessment of antipsychotic-induced movement disorders. Figure 1 is an example of a monitoring policy intended as a guide for frequency of monitoring patients. See the table below for links to examples of monitoring forms that are publicly available.

Table 1. Movement Disorder Assessment Scales

Movement Disorder Assessment Scale	Form
Abnormal Involuntary Movement Scale	AIMS
Dyskinesia Identification System: Condensed User Scale	DISCUS
Barnes Akathisia Rating-Scale	BARS
Simpson Angus Scale	SAS
Modified Simpson Angus Scale	MSAS

Lastly, Table 2 is a quick reference table for antipsychotic-induced movement disorders.

How to cite this editor-reviewed article
Hieber R. Movement disorder toolbox. Ment Health Clin [Internet]. 2012;1(7):153-5. Available from: http://dx.doi.org/10.9740/mhc.n91443

Figure 1. Example Monitoring Policy

YOUR HOSPITAL SYSTEM

POLICY NUMBER
XXX

ASSIGNED REVIEWER Medical Director	**SUBJECT** Dyskinesia Monitoring		
APPROVED BY	**ISSUED** 11/95	**LAST REVIEWED** 2/03, 1/09; 7/10	**REVISED/EFFECTIVE** 6/11

POLICY: The XXX hospital screens for known potential adverse reactions to medications and all patients receiving psychotropic medications are screened for movement disorders.

PURPOSE: To establish minimal requirements for the monitoring of patients for movement disorders.

EXCLUSION: None

PROCEDURE:

1. Patient Rating Schedule
   - 1.1 As part of the admission workup, all patients will be evaluated for involuntary movements by the physician (usually the psychiatry resident).
   - 1.2 The physician will complete the Abnormal Involuntary Movement Scale (AIMS) on all new patients within 48-72 hours of admission to the unit. The attending physician will review the rating and complete the evaluation, making treatment determinations if necessary. The AIMs is utilized to detect tardive (and other) dyskinesias.
     - 1.2.1 Indicators for Monitoring of the AIMS
       - 1.2.1.1 Monitor the patient every three (3) months if:
         - 1.2.1.1.1 The patient has a diagnosis (or history) of tardive dyskinesia.
       - 1.2.1.2 Monitor the patient every six (6) months if:
         - 1.2.1.2.1 The patient is taking a first generation antipsychotic on a scheduled basis.
       - 1.2.1.3 Monitor the patient every twelve (12) months if:
         - 1.2.1.3.1 The patient is taking a second generation antipsychotic on a scheduled basis.
         - 1.2.1.3.2 The patient is taking metoclopramide, or prochlorperazine on a scheduled basis .
     - 1.2.2 Patients at increased risk for abnormal involuntary movements include elderly patients and patients who experience acute dystonic reactions, other clinically significant extrapyramidal side effects, or akathisias.
   - 1.3 The resident physician will also perform the Modified Simpson-Angus Scale (MSAS) and Barnes Akathisia Scale (BAS) at the time of the physical examination and as clinically indicated. The MSAS is utilized to detect any acute extrapyramidal side effects and/or Pseudoparkinsonism and the BAS detects akathisia.
2. Charting/Records
   - 2.1 The proper form shall be completed each time the rating is done and filed in the Physical Exam section of the medical record.
   - 2.2 If dyskinesia, Pseudoparkinsonism, or akathisia are felt to be present, a progress note shall be completed to explain decisions regarding continued treatment with offending medications, treatment of movement disorder (if any), document patient and family education, and patient/guardian consent if medication is continued.
     - 2.2.1 Use the monitoring indicators (1.2.1) to determine when the next AIMS is to be performed & write a physician's order accordingly.

Table 2. The Mental Health Clinician Neuroleptic-Induced Movement Disorders Quick Reference Chart

Movement Disorder	Dystonia	Akathisia	Pseudo-Parkinsonism	Tardive dyskinesia
Typical Time Course	First 5 days—3months Rare tardive dystonia may occur with prolonged treatment (usually greater than 6 months)	1st 3 months, or anytime during treatment Rare tardive akathisia may occur with prolonged treatment (usually greater than 6 months)	1st 3 months (5 to 90 days)	6 months—years
Risk Factors	Treatment naïve (e.g. young black males), elderly, 1st generation antipsychotic	1st generation antipsychotic	Women, older age (>40 years) 1st generation antipsychotic	Middle-aged women, elderly, long-term neuroleptic use, greater for 1st generation antipsychotics, high dose, high potency agents
Signs/Symptoms	Acute muscle spasm, can occur in any muscle of body – look for stiffness, immobility Most frequently occur in head/neck	Subjective/objective feelings of inner restlessness, uncomfortable and unrelenting	Decreased movements (mask-like facies, bradykinesia, akinesia), muscle stiffness (cogwheel and lead pipe rigidity), resting hand tremor, drooling, and shuffling gait	Involuntary movements including blinking, lip smacking, and writhing movements of the face, neck, back, trunk, and/or extremities
Assessment Scales Available to the Public	Simpson Angus Scale	Barnes Akathisia Scale	Simpson Angus Scale	Abnormal Involuntary Movement Scale Dyskinesia Identification System-Condensed User Scale
Management	Intramuscular diphenhydramine or benztropine, may need repeated dosing until symptoms resolve Benztropine (oral 1-2 weeks, may prevent recurrence) Reduction of dose, slower titration, or changing agent	Anti-Parkinson's agent, beta blocker, or benzodiazepine May reduce dose of agent	Reduce dose, change agent, or use oral agents such as Benztropine, trihexyphenidyl, diphenhydramine, biperiden, or amantadine (taper anticholinergic & reassess every 4 to 6 weeks)	No effective treatment, may worsen by abruptly stopping/lowering dose/adding anticholinergic and then improve over time May be a role for clozapine or quetiapine