Manic depressive illness is a biological brain disorder that produces significant alterations of mood and psychosis. Mania in the elderly occurs in three forms: (1) Bipolar patients who get older (2) elderly patients with pre-existing depression who develop manic symptoms and (3) elderly patients who first present with mania. Late life onset mania is relatively uncommon and may signal underlying neurological diseases, e.g., stroke, brain tumor etc. Approximately 5% of elderly psychiatry units are manic. Among elderly patients with mania (table 1), 26% have no past history of mood disorder, 30% have pre-existing depression, 13% have past mania and 24% have organic brain disease. Although the life expectancy of bipolar affective disorders is probably shorter than that of the general population due to suicide and alcoholism, many bipolar patients do survive into the seventh or eighth decade. The natural history of bipolar affective disorder in the elderly is unclear although longitudinal studies demonstrate that some bipolar patients have shortening of cycles and increased severity of disease.

Well-controlled bipolar patients become unstable for many reasons (table 2). Patients have worsening of symptoms as a result of (1) medication non-compliance, (2) medical problem, (3) natural history, i.e., changes in the symptoms over time, (4) caregiver death, (5) delirium, (6) substance abuse, and (7) inter-current dementia.

Elderly bipolar patients who have acute worsening of symptoms need a careful evaluation to exclude delirium. Elderly psychiatric patients exhibit high rates of alcohol abuse and prescription sedative overuse that produce delirium. Agitated, delirious patients can appear manic. Psychoses, agitation, paranoia, sleep disturbance and hostility are symptoms common to both diseases. Delirious bipolar patients will often have a significant drop in the Mini-Mental Examination score from baseline while cooperative mania patients should have steady scores.
Discontinuation of mood-stabilizing medication is a common problem in elderly bipolar patients (table 3). Patients discontinue medicine for multiple reasons, (1) new medical problem (2) non-compliance (3) death of caregiver and loss of support or (4) physician discontinuation due to perceived complications from medications. Blood levels should be regularly monitored on all bipolar patients. Antimanic agents may be discontinued during a serious medical illness during which the patient can no longer take oral medication and these agents should be restarted as soon as possible. Medical physicians should not discontinue antimanic agents for more than two or three days without seeking a psychiatric consultation. Bipolar patients will sometimes discontinue medication when the spouse or caregiver dies and the patient lose psychosocial support mechanisms. Primary care physicians will sometimes discontinue lithium or Tegretol because of perceived side effects. Lithium and Tegretol are essential to maintain mood stability for many bipolar patients. Elevated BUN or creatine is not an automatic indication for lithium discontinuation (Table 4). Patients should have a 24-hour urine collection and patients with creatinine clearances below 50ml per minute, should be referred to a nephrologist for consultation. Many elderly bipolar patients with elevated BUN and creatinine who receive lithium do NOT have lithium-induced nephrotoxicity. Elevated kidney function studies are common in the elderly. Lithium, Tegretol or valproic acid should NOT be discontinued due to medical problems unless an internist or sub-specialist is consulted or an emergency exists.

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<tr>
<th>III. DISCONTINUATION OF MEDICATION</th>
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<tbody>
<tr>
<td>1. Medical Problems</td>
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<td>2. Non-compliance</td>
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<td>3. Caregiver</td>
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<td>4. Physician Mistake</td>
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Consultants should be informed that discontinuation of antimanic agents will probably precipitate a relapse. Acute mania will often destabilize medical problems of elderly bipolar patients. Manic

### Table IV

**Management Of Elderly Bipolar Patients Who Receive Lithium And Exhibit Elevated BUN Or Creatinine**

1. **Recheck lab values**
2. **Assess patient hydration**
3. **Perform 24-hour creatinine clearance**
4. **Obtain nephrology consult**
5. **Schedule conference call between psychiatrist and nephrologist to explain potential consequences of Lithium discontinuation**
6. **Discuss options with family and patient**
elderly patients who are stressed by psychotic agitation may stop all medications including cardiac medicines, antihypertensives, etc. The clinicians must carefully weigh the medical risk of sustained anti-manic therapy verses the medical risk of acute psychosis. This decision requires clear communication among medical specialists, psychiatrist, patient, and family.

New, unrecognized medical problems like thyroid disease, hyperparathyroidism, theophylline toxicity can resemble mania. Many medications can destabilize mood. Antidepressants and steroids commonly provoke manic symptoms but ACE inhibitors (angiotensin converting enzyme); thyroid supplementation and AZT will also cause mania in the elderly.

Spouse or caregiver loss is common in elderly bipolar patients. Families care for most elderly bipolar patients and most caregivers are spouses. The stress of bereavement over caregiver illness or death will often trigger affective symptoms in otherwise stable patients. The absence of caregiver support will complicate management of the patient. Non-compliance is common in this situation and the treatment team should strive to reinstitute antimanic or antidepressant agents while attempting to arrange living circumstances for the patients. Home health services, sitters, and other home-based care are helpful. Acute inpatient hospitalization followed by partial hospital care maybe necessary to restabilize the patient.

The prevalence of dementia in elderly bipolar patients is unknown, although, studies suggest numbers similar to the general population. The clinical features of dementia are not well described in bipolar patients; however, many patients resemble typical Alzheimer or vascular dementia patients. The Mini-Mental Status Examination can be used to screen for dementia in the bipolar patient. Patients with profound depression may appear to have dementia, frequently referred to as depressive pseudo-dementia. Severely manic individual may appear confused or delirious especially in patients with severe thought disorder. Demented bipolar patients require careful evaluation because of their complicated psychopharmacology. Renal failure, hypocalcemia, hypothyroidism and hyperparathyroidism must be excluded as the cause of cognitive impairment in bipolar patients. Lithium and Tegretol toxicity can also masquerade as cognitive impairment. All bipolar patients with dementia need a careful, meticulous evaluation to exclude

V. SIGNS OF DEMENTIA IN BIPOLAR AFFECTIVE DISORDER

1. Impaired ADL function
2. Worsening of Mania Symptoms
3. Memory Impairment
treatable causes of confusion. Control of more symptoms becomes more difficult when bipolar patients develop dementia. Demented bipolar patients may require more frequent hospitalization and long term management in a partial hospital setting. Standard treatments for Alzheimer’s disease, e.g., Aricept, are not demonstrated to help in the bipolar patient with dementia. Bipolar patients with dementia should continue to receive mood-stabilizing medications.

Most manic patients respond to a single agent in combination with appropriate doses of neuroleptic. Clinicians should avoid long term benzodiazepine therapy in the bipolar with dementia. Small doses of short half-life benzodiazepines, like Ativan, can be used for inpatient management of acute agitation but these medications increase risk of delirium and falls. Serious medical complications from lithium include diabetes insipidus, renal failure, hypothyroidism, and exacerbation of cardiac disease (e.g., sick sinus syndrome). Elderly patients are more sensitive to lithium toxicity including confusion and unsteadiness. Tegretol causes hyponatremia (low sodium), neutropenia (low white blood cell count), and ataxia (unsteadiness). Valproic acid causes thrombocytopenia (low platelets). Patients can be sustained on subtherapeutic blood levels of each medication if symptoms are controlled. Symptomatic patients should be titrated into mid-therapeutic range to determine medication efficacy. Never exceed therapeutic anticonvulsant or antimanic levels unless there is specific rationale documented in the record. Gabapentine (Neurontin), and other new anticonvulsants have not been proven effective in elderly patients with bipolar disorder, although Neurontin is commonly used to control manic symptoms.

The atypical antipsychotics, e.g., Olanzapine or Seroquel, are probably better than standard neuroleptics, e.g., Haldol. Older medications have less mood-stabilizing effect and higher rates of EPS like Parkinsonism Tardive dyskinesia (TD) which occurs in 35% of elderly bipolar patients. Chronic neuroleptic use will produce TD in most at-risk bipolar patients within 35 months of therapy as opposed to 70 months for schizophrenics. These figures are worse in the elderly.

The superiority of typical versus atypical medications in the management of elderly patients with bipolar affective disorder remains controversial most studies conclude that newer medications provide better control of manic symptoms. New atypical medications including seroquel, olanzapine, and risperdal are widely prescribed in all age groups. These medications are helpful for elderly bipolar patients because they have fewer side effects, and are as effective as typical anti-psychotics. Atypical anti-psychotic can be used to manage patients unable to take mood stabilizers or who fail to respond to single agent therapy. Each of the atypical anti-psychotics is compatible with major mood stabilizers such as lithium, tegretol, and valproic acid. Elderly bipolar affective disorder patients
have higher risks for tardive dyskinesia. Atypical medications have lower risk rates of EPS. Olanzapine and Respiridone behave like high potency typical anti-psychotic medication while seroquel is more like a low potency typical anti-psychotic. The lack of injectable preparations for acute agitation and the absence of a depot preparation for long-term psychotropic drug compliance are significant drawbacks to the use of atypical anti-psychotics. Atypical medications are more expensive than older medications.

Bipolar affective patients who have previously responded to brief courses of typical anti-psychotic therapy should have these medications re-instituted. Patients who fail typical anti-psychotics or patients who develop significant EPS should be started on the atypical medications. Patients requiring sedation may improve with Seroquel while patients with orthostatic hypotension or mild confusion may respond better with Risperidone or Olanzapine.

Management of the unstable or therapy resistant bipolar patient requires a methodic approach and perseverance by patient, family, and clinician. Single agents, e.g., lithium, Tegretol or valproic acid should be tried in therapeutic doses in conjunction with appropriate doses of neuroleptics for a minimum of six-weeks. After each major medication, i.e., lithium, Tegretol, valproic acid, has been tried at therapeutic levels, combinations of two medications plus neuroleptics should be initiated. Recent studies indicate that Gabapentin may also improve manic symptoms. Tegretol may be helpful for patients with angry, hostile, impulsive behavior. The risk of falls, delirium and drug-drug interaction increases with each additional medication. Failure on triple therapy, e.g., neuroleptic, lithium, Tegretol warrants the use of ECT. Sustained severe manic symptoms are detrimental to the patient’s psychiatric and medical status. Bipolar disorder should be treated aggressively in the elderly to avoid future complications. A group of elderly bipolar patients develops therapy resistant mania with persistent psychotic symptoms. These patients may require institutional care until they “burn-through” their disease; a process that may require years to stabilize. Mania is a complex disorder in the elderly. Management of the elderly manic requires a sophisticated management strategy that accounts for bio-medical psychosocial aspects of the disease.

Table 6

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<th>MANAGEMENT OF MANIA RELAPSE</th>
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<tbody>
<tr>
<td>MEDICATION COMPLIANCE</td>
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<td>Restart Medications NO</td>
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<td>YES</td>
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Comprehensive Management of the Elderly Patient with Mania
NEW MEDICAL PROBLEM OR MOOD-DE-STABILIZING MEDICATION

Treat Problem or Stop Medication

YES

NO

CAREGIVER LOSS

Re-establish Support System

YES

NO

DEMENTIA

Adjust Medications and Social Support System

YES

NO

SEQUENTIAL TRIAL OF SINGLE, DOUBLE OR MOOD STABILIZING TRIPLE MEDICATIONS

Maintenance Therapy

IMPROVED

UNSTABLE

ECT

STABLE

UNSTABLE

LONG-TERM HOSPITALIZATION WITH CONTINUED PHARMACOLOGICAL TRIALS