Clinical Assessment of Older Adults with Bipolar Disorder

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2.1 Introduction

Among older individuals with bipolar disorder, there may be substantial variability in clinical presentation and outcomes [1, 2]. Medical comorbidity is the norm rather than the exception, and cardiovascular disease, metabolic abnormalities, and cognitive impairment are particularly relevant across the life span [3–5]. Cognitive dysfunction may occur in at least 1/3 of older people with bipolar disorder [6]. Over time, bipolar disorder might act in concert with other neuropathological mechanisms such as vascular disease to accelerate aging and cognitive deterioration [1–6].

This chapter on clinical assessment of older adults with bipolar disorder will discuss the differential diagnosis of manic presentation in older individuals as well as the elements of a clinical evaluation appropriate for the older adult who may

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have bipolar disorder. This includes the psychiatric clinical interview, history-taking, risk assessment, application of standardized techniques in the assessment of mood symptoms, and that of cognition as well as the assessment of medical and psychiatric comorbidities.

Clinical Vignette 2.1

Introduction

Ms. K is a 62-year-old married woman with type I bipolar disorder, maintained on lithium 1200 mg/day for the past 25 years. She has had 2 psychiatric hospitalizations in her lifetime—the first related to a manic episode in her mid-twenties and then a post-partum depression after the birth of her second child at the age of 30. She successfully responded to electroconvulsive therapy (ECT) for the episode of post-partum depression.

Ms. K has maintained a relatively stable euthymic state over the past decade although she has had some difficulty in her performance as a clerk in an insurance company over the last year since the company implemented a new electronic record system which she has found hard to master. She feels frustrated that some of her younger coworkers have no problems with the new computer system, while she continues to struggle.

Relevant Medical History

Ms. K is 18 kg overweight with a history of type II diabetes mellitus, treated with an oral hypoglycemic agent. Her most recent laboratory testing demonstrated $HbA1_c = 7$. She has hypertension and is prescribed a beta-blocker. At times she forgets to take her antihypertensive medication, although her adherence has improved somewhat over the past 6 months after her daughter recommended that she use a weekly pill-minder. Ms. K has a history of migraines, which have been well controlled with as-needed use of a triptan drug. Her clinician recently checked a basic metabolic serum panel which was unremarkable except for a serum creatinine value of 1.1 mg/dL. Ms. K has been smoking ½ pack of cigarettes/day for the past 4 decades. Her mother had a history of recurrent depression and developed Alzheimer's disease in her 70s.

A New Problem

Approximately 6 months ago, Ms. K noticed a mild bilateral hand tremor that caused her embarrassment and slightly interfered with her ability to conduct her clerical duties. Her primary care clinician checked a basic serum chemistry panel and told her that labs looked "fine" except for "very mild impairment in kidney functioning," but did not recommend further medical work-up or evaluation. Worried about both the tremor and the abnormal laboratory testing, Ms. K reduced her lithium on her own to 900 mg/day. Her tremor resolved within the next week.

In the Last Several Weeks

Ms. K has become increasingly irritable at home. She is waking up approximately twice during the night to use the toilet, but unlike her previous usual pattern has found it difficult to get back to sleep readily when she returns back to bed. Last week, Ms. K made a few inappropriate comments to a coworker in the employee lounge which was out of character for her. Now, her concerned husband accompanies her to the clinician's office. He states that Ms. K seems "forgetful" at times in addition to being irritable and wonders if she is developing dementia like her mother.

2.2 Differential Diagnosis

Manic symptoms, such as disturbed sleep, irritability, and impaired attention, in later life have a broad differential diagnosis including (late-onset) bipolar disorder (LOBD) and schizoaffective disorder (primary mania), mania due to a specific medical cause (secondary mania) as well as delirium and dementia. Older age mania is not rare; the overall prevalence is estimated to be 6.0 % in older psychiatric inpatients with about one-third experiencing their first manic episode (i.e., late-onset mania) [7]. Although the management of both primary mania and secondary mania may be similar, the etiology of mania is of importance as the appropriate treatment of secondary mania includes addressing the cause [8].

2.2.1 Mania and Physical Health

Older age manic symptoms and physical health are highly linked. Somatic factors may be a true cause of mania (secondary mania) or may trigger mania as a first manifestation of bipolar disorder in a person with a latent vulnerability, either with or without a history of depressive episodes. Somatic comorbidity may also be present in an individual without any causal relationship to mania.

The concept of secondary mania was introduced by Krauthammer and Klerman in 1978 [8] as a condition with manic symptomatology resulting from an underlying medical illness that could develop in people with no history of mood disorder. For manic symptoms to be classified as secondary mania, the patient should have no history of primary mood disorder or evidence of delirium. As noted in Table 2.1, the list of various neurological conditions, systemic disturbances, and medications that have been described to cause secondary mania is extensive [9] Mania has been linked to cerebrovascular accidents, primary or metastatic brain tumors, and traumatic brain injury. Temporal lobe epilepsy, encephalitis, meningitis, HIV encephalopathy, and tertiary syphilis have all been associated with mania [10]. In

Table 2.1 Possible causes of secondary mania

Neurological	Dementia/neurocognitive disorders
	Traumatic brain injury
	Epilepsy
	Infectious encephalitis
	Cerebrovascular disease
	Brain tumors
	Movement disorders
Systemic	Infections
	Thyroid abnormalities
	Illicit Drugs: i.e., cocaine
Medication	Antidepressants
	Benzodiazepines
	Corticosteroids
	Thyroid replacements
	Dopamine agonists
	Antibiotics

addition, thyrotoxicosis, Cushing's disease, vitamin B12, and niacin deficiency can produce symptoms which mimic mania [11]. While secondary mania can occur at any age, it is more common in older patients given the higher prevalence of potentially causative medical conditions and medications.

Presently, data are lacking to label "due to a somatic condition or medication" as a diagnostic specifier in bipolar disorder. As we know from other psychiatric disorders (e.g., schizophrenia), certain substances (e.g., cannabis) can prime the development of psychiatric disease. As with delirium, many somatic conditions can cause mania; however, some patients seem more at risk. For example, vascular risk factors may prime older patients and patients with vascular (non-symptomatic) brain damage to develop manic-type symptoms.

2.2.2 Mania as a Symptom of Dementia

Particularly relevant to the clinical assessment of older adults, depending on the location of neurodegeneration, disinhibited behavior can be a symptom of Alzheimer's disease [12] or vascular dementia [13]. Disinhibition is also one of the core symptoms of the behavioral variant of frontotemporal dementia (bvFTD) [14]. According to the recent International Consensus criteria for bvFTD, at least 3 of the 6 core symptoms of behavioral disinhibition-apathy, stereotyped or compulsive behavior, loss of empathy, hyper-orality, and executive deficits are needed to make the diagnosis [14]. Neuroimaging and cerebrospinal fluid (CSF) biomarkers may help in possibly understanding potential cause of dementing illness [15, 16]; however, the differential diagnosis for FTD currently relies on clinical judgment. Frontal lobe syndrome, a positive history of psychiatric illness, male gender, a relative absence of stereotypy, and presence of depressive symptoms are predictive for psychiatric origin symptoms rather than bvFTD [17].

A possible link between bipolar disorder and bvFTD has also been suggested by case reports of patients presenting with manic symptoms as a first manifestation of bvFTD [18, 19] and patients with a lifetime diagnosis of bipolar disorder evolving into bvFTD [20, 21]. This large clinical overlap in social cognition, executive disturbances, and behavioral profiles might be explained by the involvement of common functional neuro-anatomical networks [22–24]. A proportion of bvFTD patients have a slow course with relatively normal neuroimaging, particularly those carrying a C9orf72 repeat expansion [25]. This repeat expansion has been found in patients with bipolar disorder preceding FTD [26, 27]; however, this mutation was not detected in a cohort of 206 patients with bipolar disorder [28].

The condition fulfilling criteria for *possible* bvFTD failing to convert to *probable* bvFTD over time is labeled the benign bvFTD phenocopy syndrome [29, 30]. These patients exhibit behavioral and functional impairments consistent with a frontal lobe syndrome but fail to progress over time and have no frontal or anterior temporal atrophy or hypo-perfusion at follow-up. Although an alternative explanation is generally lacking in these cases, it is possible that this could be an end-stage manifestation of bipolar disorder.

2.2.3 Secondary Mania with a Neurological Cause

Although far less common than depression, mania can occur in 1 % of stroke patients, in 2–12 % of patients with movement disorders such as Huntington's disease, in patients with epilepsy or infections of the brain [31]. Tumors, neurosurgery, and traumatic head injury can result in manic symptoms [10], occasionally with a delay of up to 12 months before the manic symptoms develop [32, 33]. Focal brain lesions in the right hemisphere have been associated with mania [34]. Steffens and Krishnan [35] proposed criteria for vascular mania and depression subtype specifiers, and their concept of vascular mania appears to have some overlap with the neurological disinhibition syndrome. Late-life mania may occur in patients with non-symptomatic vascular brain damage.

Differentiating between frontal disinhibition and bipolar mania can be challenging. While many symptoms are overlapping between the two conditions, bipolar mania may be more characterized by elevated mood and decreased need for sleep, rather than disturbed sleep. The presence of a positive family history of affective disorder may indicate that a somatic cause resulted in mania by triggering an existing bipolar predisposition [8].

2.2.4 Mania in the Context of Established Older Age Bipolar Disorder

In general, medical comorbidities are a substantial burden in older age bipolar disorder patients [36, 37]. A retrospective chart review of 73 patients over age 65 admitted for a manic episode revealed that 86.3 % had medical comorbidity [38].

Clinical emphasis on maintaining optimal physical health and avoiding polypharmacy may optimize the likelihood for better outcomes.

Clinical Vignette 2.1, Continued

Ms. K's new symptoms of irritability, disturbed sleep, and disinhibited behavior in the context of her history of bipolar 1 disorder, diabetes, hypertension, and medication use warrant closer evaluation. Her symptoms of irritability, decreased sleep, and disinhibition are consistent with a manic episode. Her husband mentioned concern about memory problems, and her difficulties in mastering the new computer system could indicate executive dysfunction. Her behavioral changes and cognitive impairment could also suggest possible early dementia and several etiologies could be considered. Hypertension, diabetes, and smoking are all risk factors for vascular dementia, and her family history is positive for Alzheimer's disease. With her disinhibited behavior, diminished social empathy, and problems in executive functioning, she could fulfill the criteria for bvFTD.

Ms. K's inadequate medication adherence, an untreated medical condition, or a new somatic comorbidity presenting as secondary mania should all be considered.

The clinical picture of older age bipolar mania can present as a mild confusional state, with disturbed attention as a key symptom. Additionally, the first priority should be to check her lithium serum levels, as toxicity can cause a variety of symptoms and subtherapeutic serum levels can induce a relapse.

Learning Points

- Medical comorbidity is common in older people with bipolar disorder.
- New onset physical symptoms, such as tremor, may represent emerging and aging-related, drug-related side effects or new medical or neurological comorbidity. This needs careful clinical evaluation that includes obtaining collateral history.
- Treatments for bipolar disorder need to be monitored and periodically reassessed as individuals age. Over time, some individuals may develop adverse effects or relative intolerability to specific therapeutic agents.

2.3 Assessment

2.3.1 The Clinical Interview and History-Taking

Recognizing and accurately diagnosing bipolar disorder in the geriatric population can be challenging. This is due to a number of factors, including the influence of culture and concomitant medical comorbidities, as well as the cyclical and chronic

nature of bipolar disorder. From a diagnostic perspective, the presence of bipolar depression or psychotic symptoms may complicate the clinical presentation and distinguishing between mixed episodes, agitated depression, or mania with psychotic symptoms or a schizoaffective disorder adds to the complexity of diagnosis. Additionally, co-occurring psychiatric conditions (e.g., substance abuse) may distract clinical focus from symptoms of bipolar disorder, especially if the presenting symptoms for the other condition are more severe and prominent. Accurate diagnosis can be complicated in patients presenting with concurrent cognitive symptoms. For example, to return to our clinical vignette, it is very important for the clinician to determine whether Ms. K's new complaints of forgetfulness and frustration with the new electronic record system are the outcome of distractibility—as part of an acute manic episode exacerbation—or due to new neurological etiology such as Alzheimer's disease or FTD.

The literature is not clear as to whether there are symptom profile and severity differences between patients with OABD and younger individuals with bipolar disorder. Studies have suggested that some mood symptoms—namely anorexia, anxiety, somatic complaints, psychomotor agitation, suicidal behavior, hallucination, and delusions—are more severe in older age bipolar disorder [39]. However, Al Jurdi et al. [40] found that neither the severity nor the prevalence of bipolar manic or depressive symptoms differed when comparing young bipolar patients with older bipolar patients. Importantly, the *DSM-5* has no age-specific variations in diagnostic criteria for bipolar disorders.

The success of a clinical interview depends on collecting all relevant information through effective communication. This is especially important when interviewing older patients. Box 2.1 provides suggestions to guide the clinician's interaction with older patients. During the interview of a geriatric patient, atypical, subsyndromal, and vague symptoms can be expected. Clinicians should make thorough inquiries about symptoms that patients may perceive to be expected aspects of aging. These include sleep disturbances, lethargy or decreased energy, and changes in appetite. Using a structured format and in consideration of the patient's symptoms, a psychiatric review of systems should be part of the initial interview.

Box 2.1 Tips for interviewing geriatric patients

- Address the patient by last name (family name), using the title patient prefers.
- Speak slowly in a clear, low-pitched voice.
- Face the patient directly at eye level to allow for lip reading in those who may be hard of hearing or hearing-impaired.
- Pay attention to verbal and nonverbal clues (tempo of speech, tone of voice, eye contact).
- Remember that the exam starts in the waiting area, Observe movements walking into room, gait, ability to sit and rise from the waiting room chair.

- Allow adequate time for the patient to respond (information processing and memory retrieval may be slow, but unimpaired).
- Include family and support-system members as appropriate for the patients cognitive, functional and sociocultural status.
- Don't rush and try not to interrupt.
- Use active listening skills.
- Eliminate visual and auditory distractions (background office noises).
- Use adequate lighting (including sufficient light on your face).

Clinicians should explore the patient's current and past hypomanic, syndromal manic, mixed, or major depressive episodes as well as observed euthymic and subsyndromal symptoms. The interviewer should address onset, frequency, prodromes, precipitants of symptoms, and the impact of patients' symptoms on their daily social and occupational activities.

In the case of the clinical vignette, Ms. K's struggles with the new computerized system could reflect cognitive symptoms, while her relationship with her colleagues could reflect mood symptoms. Additionally, the existence of other psychiatric conditions during prior mood episodes should be characterized as well as both adverse and therapeutic responses to past treatment approaches. A depressed patient's ability to describe and recall past elevated mood events may be impaired. Similarly, during a manic episode, patients tend to have a suboptimal insight on the nature of manic symptoms. Patients with chronic illness characterized by numerous episodes of mood illness may find remembering the details about a specific episode to be problematic. In these instances, collaborative sources, such as family or close informants, can fill in the gaps to ensure diagnostic accuracy.

As noted in Box 2.2, medical history and current medical status are crucial components of the clinical interview of the older patient. Because some psychiatric conditions arise due to comorbid physical conditions, and because medical disorders can worsen symptom severity of a primary psychiatric condition, prior and existing medical conditions and treatments must be evaluated in detail. Co-occurring psychiatric conditions, past and current treatments, and treatment response as well as adherence to treatment regimens and lifestyle factors such as physical activity levels and use of tobacco or other substances must all be incorporated into the assessment and plan of care.

Box 2.2 Elements of the clinical interview for an older patient

- Chief complaint (s).
- Current symptoms and history of present illness.
- Psychiatric review of systems.
- Past psychiatric history.

- Family psychiatric history.
- Family medical history.
- Social history.
- Developmental history.
- Current and past medical history including medications prescribed, medication adherence and list of current healthcare providers as well as previous diagnostic procedures such as neuroimaging and neurocognitive evaluations.
- Assessment of lifestyle factors (drugs and alcohol, smoking, exercise and other healthy or unhealthy behaviors).
- Assessment of past and recent functional status including driving history, independent living skills, and guardianship status.

Addressing biopsychosocial stressors is a priority in the evaluation of the older patient with known or suspected bipolar disorder. The interview should assess current employment if applicable, sources of social support (including guardianship status), religious beliefs and participation, cultural experience, marital status, living situation, and an assessment of functioning including any changes in social and occupational functioning or activities of daily living, such as ability to prepare meals or drive. Because of the chronicity and the involvement of multiple organ systems in bipolar disorder, the context in which a patient is experiencing and attempting to cope with cognitive dysfunction, comorbid medical conditions, and difficulty with activities of daily life is highly relevant.

When taking the family history, priority should be given to obtaining information about first-degree relatives and/or others who have received diagnoses of and undergone treatment for psychiatric disorders or symptoms (e.g., suicidal ideation and attempts, and psychotic disorders and symptoms, etc.).

As warranted by the history and presentation, reviewing recent or implementing new imaging and laboratory workup is recommended. As discussed previously, many neurological and systemic diseases can present as mania. Accordingly, frequently ordered tests in the evaluation of the geriatric patient with what appears to be bipolar symptoms include complete blood count blood electrolytes, kidney and liver function tests, thyroid function tests, urinalysis and urine drug screen, EKG, and $B_{12,}$ folate, fasting lipid profile, and fasting blood glucose [41–44] (Table 2.2). More specialized testing may warranted depending on the clinical presentation and differential diagnosis. For example, brain imaging [brain-computed tomography (CT) or magnetic resonance imaging (MRI)], an electroencephalogram (EEG), or lumbar puncture with cerebrospinal fluid analysis may be ordered to rule out cerebrovascular accidents seizures or meningoencephalitis presenting with manic symptoms [42–44].

Table 2.2 Assessment of physical health in older bipolar patients

Recommendations	
History	Medical history
	Medications including over the counter medications
	Cigarette smoking
	Alcohol and illicit drug use
	Family history for somatic illnesses History of medication/other allergies
Physical examination	Blood pressure and pulse
	Waist circumference if there is concern for possible metabolic syndrome
	Weight and height ECG
laboratory studies	Full blood count
	Electrolytes, urea, creatinine
	Liver function tests
	Fasting blood glucose
	Fasting lipid profile Thyroid screening B12, folate (if there is concern about cognitive impairment) Serum blood levels of current medications such as lithium and anticonvulsant medications

Used with permission from Ng et al. [41]

2.3.2 Risk Assessment

Care should be taken when evaluating older patients for risk of self-harm. In 2014, the suicide rate of elderly men older than 65 years was reported to be 16.6 per 100,000. Among white men over 85 years, the suicide rate is 50.67 per 100,000 the highest of any age-gender-race group [45]. Suicidal ideas or fantasies as well as recent actions, religious and cultural beliefs, and any previous history of disinhibition impulsivity should all be assessed. Access to weapons and other methods of self-harm must be evaluated, especially if the patient reports having considered such methods. Information on prior incidents of self-harm, including aborted or actual suicide attempts, is crucial. Intervention is warranted when patients present with anhedonia, feelings of hopelessness, a history of suicide attempts [46], impulsivity [47], anxiety [48], psychosis [48, 49], or substance use [50, 51]. Patients who can find no reason to continue living or have stopped planning for the future such as the individual with severe chronic and/or terminal illnesses are at high risk for suicide [52]. Hospitalization or other high-intensity interventions should be pursued as determined by careful risk assessment.

2.3.3 Cognitive Assessment

Cognitive dysfunction is well recognized as a core component of bipolar disorder [53, 54–56]. Cognitive deficits occur in approximately 40–50 % of euthymic, geriatric bipolar patients [6, 57, 58] and have been noted to occur across mood states, and to persist through the euthymic phase [59–63]. Dysfunction is found in attention, cognitive flexibility, information process speed, memory, semantic fluency, and verbal fluency [54, 64, 65]. Numerous individual neuropsychological tasks have been evaluated in studies addressing cognitive function in bipolar disorder. More vascular burden and more psychiatric hospital admissions in addition to age are associated with cognitive dysfunction in older age bipolar disorder [66]. Cognitive dysfunction in older people is associated with worse clinical outcomes [67].

The area of cognitive assessment in bipolar disorder generally has expanded in recent years. While most general psychiatrists will not administer neuropsychological testing, it may be helpful to understand some of the key domains where cognitive impairment may occur. Recently, studies of bipolar disorder in the general population have included core measures from the Measurement and Treatment Research to Improve Cognition in Schizophrenia (MATRICS) for Consensus Cognitive Battery (MCCB) [54], with some modifications specific to bipolar disorder [68]. The MATRICS Consensus Cognitive Battery (MCCB) was initially designed to be uniformly applied to clinical trials targeting cognitive function in patients with schizophrenia [69, 70]. MCCB assesses the domains of attention/vigilance, processing speed, working memory, verbal learning, visual learning, reasoning and problem solving, and social cognition. MCCB has been tested in mixed-age patients with bipolar disorder [71, 72]. The Brief Assessment of Cognition in Affective Disorders (BAC-A) is composed of 6 subtests of the Brief Assessment of Cognition (BAC) and Brief Assessment of Cognition in Schizophrenia (BAC-S) and 2 additional tests: affective interference and emotion inhibition. A composite score is derived from the 6 subtests of the BAC-A, as well as the BAC and BAC-S [73].

The International Society for Bipolar Disorders–Battery for Assessment of Neurocognition (ISBD-BANC) is a cognitive battery developed to address specific cognitive issues in bipolar disorder in order to be more applicable for international use in broad bipolar disorders research. ISBD-BANC includes subtests from the MCCB and the Stroop Test and TMT-B, while flexible components include the use of either the HVLT-R or CVLT, as well as the optional inclusion of the WCST [68].

Specific to the older age bipolar population, a general neuropsychological battery by Gildengers et al. [74] encompassed 21 well-established and validated individual tests measuring multiple cognitive domains, and grouped into four distinct cognitive domains based on factor analysis: Delayed Memory, Information Processing Speed/Executive Function (Trails A, Stroop, Executive Interview, Animal Fluency, Digit Symbol Substitution Test), Language (Spot the Word, Letter Fluency, Silly Sentences), and the Visuomotor (Rey-Osterrieth Complex Figure Copy, Simple Drawings, Finger Tapping, Block Design, Trails B). While most office-based clinical evaluations do not include an extensive neurocognitive battery, a comprehensive evaluation of the older adult with bipolar disorder that seeks to answer important

questions such as current and future support needs should include at least a subset of cognitive evaluations for task-specific domains.

2.4 Symptom Rating Scales

Standardized rating scales have been critical for studying bipolar disorder and a number of these scales are useful in an office setting for both evaluating and monitoring patients. In research, assessment of bipolar disorder and psychiatric comorbidities can be done through a semistructured diagnostic interview, as the Mini-International Neuropsychiatric Interview Plus (MINI) [75] or Structured Clinical Interview for DSM Disorders (SCID) [76]. Several scales are available to rate comorbid symptoms, such as the Beck Anxiety Inventory (BAI) [77] and Hamilton Anxiety Rating Scale (HAM-A) [78] for anxiety symptoms, or Alcohol Use Disorders Identification Test (AUDIT) [79] for alcohol use. A major function of rating scales, particularly in clinical trials, is to assess bipolar symptom severity. Some of the briefer rating scales, especially those that are self-rated tools such as the Quick Inventory of Depressive Symptomatology (QIDS) and the Beck Depression Inventory (BDI), can be used in clinical settings. Commonly used bipolar symptom rating scales, including those that can be self-rated by patients, are summarized in Table 2.3. In the era of growingly sophisticated information technology, electronic self-monitoring instruments using computers, personal digital assistants, Web interfaces, and smartphones have recently been explored. A recent review by Fauholt-Jepsen et al. [80] suggested that electronic self-monitoring of depression is more robust than that of mania and that more rigorous studies on its benefits and harm are needed.

2.4.1 Assessment of Comorbidities

2.4.1.1 Psychiatric Comorbidities

The definition of comorbidity is the occurrence of 2 syndromes in the same patient, and presupposes that they are distinct categorical entities. Psychiatric symptoms, fitting the criteria for an anxiety disorder, substance abuse, or personality disorder may be part of bipolar disorder or occur alongside of it as a comorbid condition. This explains why rates vary among studies, with up to 65 % of bipolar patients meting DSM-IV criteria for at least 1 comorbid Axis I disorder [82]. Common psychiatric comorbidities in studies among younger adults with bipolar disorder include substance abuse, anxiety disorders, attention-deficit/hyperactivity disorder, eating disorders, and personality disorders [83]. In contrast, the rates of psychiatric comorbid conditions in older adults with bipolar disorder appear lower (anxiety disorders up to 9.8 %) [84, 85], except for lifetime alcohol dependence and abuse and lifetime substance dependence (latter ranging from 9 to 29 %). Psychiatric comorbidities in bipolar disorder are associated with more severe symptoms,

Table 2.3 Common symptom rating scales in bipolar disorder

Scale	Key Features
BDRS	20 items for bipolar depression; includes items that are more common in bipolar versus unipolar depression; rater-administered; 15 min
HAM-D	17 items version, and 21 items version for depression; heavily influenced by physical symptoms; rater-administered; 20–30 min
IDS-C30	30 items for depression; has both self-rated version; and rater-administered version; 30 min
MADRS	10 items for depression; minimal focus on physical symptoms rater-administered; 15–20 min
QIDS	16 items for depression; has QIDS-SR (self-rated version); and QIDS-C (rater-administered version); 5–10 min
BDI	21 items for depression; self-rated; 5–10 min
BRMS	11 items for mania; rater-administered; 15–30 min
CARS-M	15 items for mania; rater-administered; 15–30 min
CGI-BP	3 domains: mania, depression, overall; each with 3 items; rater-administered; less than 5 min
MADS	23 items for mania; rater-administered; 60 min
MMRS	28 items for mania; rater-administered; 30–45 min
MRS	11 items for mania; rater-administered; 15 min
MSRS	26 items for mania; rater-administered; 15–30 min
PS	7 items for mania; rater-administered; 15–30 min
YMRS	11 items for mania; rater-administered; 15 min

Used with permission from Sajatovic et al. [81]
BDRS Bipolar Depression Rating Scale; *HAM-D* Hamilton Depression Rating Scale; *IDS-C30* Inventory of Depressive Symptomatology-30-Item Clinician Version; *MADRS* Montgomery Äsberg Depression Rating Scale; *MDD* major depressive disorder; *QIDS* Quick Inventory of Depressive Symptomatology; *BDI* Beck Depression Inventory; *BRMS* Bech-Rafaelsen Scale; *CARS-M* Clinician Administered Rating Scale for Mania; *CGI-BP* Clinical Global Impression-Bipolar Disorder; *MADS* Mania Diagnostic and Severity Scale; *MMRS* Modified Manic Rating Scale; *MRS* Mania Rating Scale; *MSRS* Manic State Rating Scale; *PS* Peterson Scale; *SADS* Schedule for Affective Disorders and Schizophrenia; *YMRS* Young Mania Rating Scale; *MDS* Manic Depressiveness Scale; and *MDQ* Mood Disorder Questionnaire

increased suicidality, poor adherence, and an overall more complicated course of illness. The need for appropriate treatment of substance use is underlined by the findings that bipolar patients who achieved sustained remission of their comorbid substance abuse had better outcomes in the area of role functioning [86]. In turn, effectively treating bipolar patients with mood stabilizers has been shown to reduce their engagement in substance abuse [87, 88].

2.4.1.2 Recognizing and Assessing Somatic Comorbidities

Medical conditions coexisting with bipolar disorder may be truly comorbid, related to the treatment of bipolar disorder, or a combination of both. Since few studies have studied medical comorbidities in bipolar older patients [84], knowledge on somatic comorbidities in bipolar disorder is mainly derived from studies in younger

or mixed aged samples. A review of comorbidity in older patients with bipolar disorder found an average of 3–4 medical comorbidities [84], including: metabolic syndrome (up to 50 %); hypertension (45–69 %); diabetes mellitus (18–31 %); cardiovascular disease (9–49 %); respiratory illness (4–15 %); arthritis (16–21 %); and endocrine abnormalities (17–22 %) [83], as well as atopic diseases such as allergic rhinitis and asthma (6–20 %), which can greatly impact quality of life [84, 89, 90]. The number of somatic comorbidities is reported to increase with each decade of life, to 11 comorbid somatic conditions in those older than 70 years [56].

Although older bipolar patients have a greater burden of physical illnesses than similarly aged unipolar depressed peers [91], the overall prevalence of somatic comorbidity in patients with bipolar disorder appears comparable to rates reported in community-based geriatric samples [84]. Nevertheless, bipolar patients have much higher mortality rates: death due to cardiovascular and other physical illnesses on average of 10 years earlier than the general population [92]. In light of this early mortality, patients with bipolar disorder who survive into old age likely represent a disproportionately healthier subpopulation. This was illustrated by a report on metabolic syndrome in older bipolar and schizophrenia patients with rates comparable with healthy elderly [93].

Comorbid medical conditions will limit treatment options for bipolar disorder by drug-interactions and altered drug metabolisms. Polypharmacy is frequent, with 31.7 % of patients reported to be on six or more medications [85]. As some psychiatric patients have a limited access to physical health care, screening, and prevention [94], their somatic care should have the attention of mental health professionals. The recommendations for somatic workup have been defined by the International Society for Bipolar Disorders [41] and are summarized in Table 2.2. They include history-taking, physical examination, and laboratory studies. For older patients with bipolar disorder, screening for side effects and/or complications of medication and evaluating their general physical health are recommended more frequently (2–4 times a year) [41]. In patients using antipsychotics screening for metabolic syndrome is advised (fasting lipid profile, fasting blood glucose, blood pressure, and waist circumference).

Close collaboration between mental health, primary care, and medical speciality clinicians is strongly recommended.

2.5 Summary and Directions for Future Research

As illustrated in the preceding text, the clinical assessment of the older adult with bipolar disorder requires careful consideration of aging-related factors such as increased risk of dementia, medical and psychiatric comorbidities and the psychological sequelae of cumulative medical burden, cognitive decline, and functional impairment. Mania, particularly when it is of new onset in an older individual,

should be evaluated for the presence of medical and neurological conditions as well as medications that may cause secondary mania. The clinical interview and history-taking is essential to the evaluation of the older adult with bipolar disorder as is supplemental laboratory, radiologic, and neuropsychological evaluation. Standardized tools for evaluating symptom severity, comorbidity, and neurocognitive status can be helpful in informing treatment planning and prognosis.

There is still insufficient research on assessment methods of the older individual who presents with bipolar symptoms. A recent report on older age bipolar disorder by the International Society for Bipolar Disorder (ISBD) notes that there is a critical need for studying a variety of aspects of bipolar disorder in elderly individuals, particularly as this will be helpful in health policy planning given the general global demographic trends [2]. A challenge in interpreting existing research studies is substantial sample heterogeneity and disparate measures used to evaluate symptoms, comorbidity, functional status, cognition, and other outcomes. Developing minimum data set recommendations such as use of specific symptom measures and medical burden evaluation as well as a cognitive assessment battery relevant to older individuals could help to address some of these methodological limitations and pave the way for more standardized evaluations. This is turn has potential to inform a prognosis on the individual and population level and advance understanding bipolar disorder trajectory in the second half of life.

Clinical Pearls

Differential Diagnosis

- Somatic conditions can cause late-life mania; a full somatic work-up is warranted, especially in patients who first present with mania in later life.
- Secondary mania can be caused by an extensive list of medications, metabolic disturbances and neurological conditions.
- Tumors, neurosurgery and traumatic head injury can result in manic symptoms described as vascular/neurological mania or neurological disinhibition syndrome.
- Dementia with involvement of the frontal circuit can present with manic symptoms, most specific in bvFTD.

Clinical Interview, History Taking, Risk Assessment

- The clinical interview and history-taking is essential to appropriately assess older individuals who appear to present with possible bipolar disorder.
- Collateral information from care givers and family members is an essential component of the clinical evaluation of the older individual with bipolar disorder.

- As many systemic illnesses presentation can mimic bipolar disorder, clinicians should be diligent in evaluating whether the presenting symptoms are exacerbation of a primary bipolar disorder or due to a systemic disease.
- Compared to the general population, elderly patients are at higher risk for suicide. Risk assessment is an essential element of every clinical encounter.

Cognitive Assessment

- Cognitive dysfunction is a common and core feature of bipolar disorder that is associated with disability and poor outcome. Older bipolar patients may be particularly at risk for cognitive impairment and focused cognitive assessment should be part of a comprehensive evaluation.
- Neurocognitive assessments used in later-life bipolar disorder should be sensitive enough to detect impairment and track meaningful change, and at the same time, should be practical for implementation.
- There have been a variety of neuropsychological instruments in studies of adults with bipolar disorder. The MATRICS Consensus Cognitive Battery (MCCB) appears to include reasonable core components with additional measures that have been included in the International Society for Bipolar Disorders–Battery for Assessment of Neurocognition (ISBD-BANC). Recent studies have identified neuropsychological batteries that may identify impairments most common in older adults.

Assessment of Comorbidities

- Clinicians providing care for bipolar elderly patients should carefully assess for comorbid conditions, choose treatment options that take into account these comorbid states, minimize side effects and treatment burden.
- Given the high prevalence of medical comorbidity in older bipolar patients, general medical conditions should be regularly screened for to enable timely diagnosis and treatment.
- Close collaboration between mental health, primary care, and medical speciality clinicians is strongly recommended to optimize care in these patients with high psychiatric and medical complexity.

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