How to manage a patient with bipolar who is starting to develop cognitive decline as a result of dementia

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Abstract

Bipolar disorder may coexist with cognitive deficits, which may be one of the core symptoms of the disease. Additional, independent organic changes in the brain may appear, which cause further deterioration in the cognitive and social functioning of patients. The existence of such comorbidity raises many diagnostic and therapeutic questions. It is necessary to use the existing tools carefully to diagnose bipolar dementia, with a special focus on neuropsychological assessment. Regarding pharmacological treatment, it is very important to avoid medication which could compromise the state of the patient additionally, due to toxicity and adverse effects. Pharmacotherapy should be accompanied by other methods of cognitive and social rehabilitation.

Key words: bipolar disorder, cognition, dementia, deterioration.

Introduction

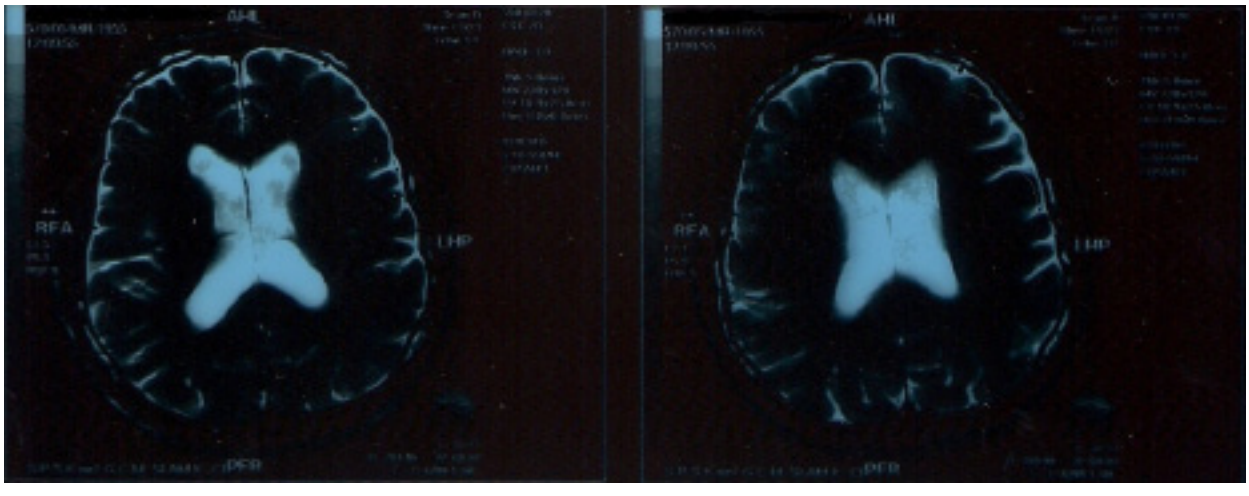
Bipolar disorder (BPD) has been known for a long time to be associated with cognitive deficits. The persistent and trait-related deficits of this disease refer to verbal memory and sustained attention and, to some extent, executive function and visual memory (1). However, lately there have been an increasing number of reports on the comorbidity of bipolar disorder and serious cognitive deterioration typical for dementia. In the literature there are more and more case reports of patients with this dual problem (2, 3, 4). There is an ongoing discussion as to whether this condition is only a problem of simple co-existence of two different disorders or whether there is a separate type of BPD closely related to the dementia process. Some authors postulate the existence of a BPD subtype, referred to as late onset bipolar illness, dementia specific to BPD or Bipolar VI (5, 6). It is hypothesized that there is a link between the number of subsequent affective episodes and the risk of developing the dementing process (3). There are also reports of early-onset BPD with features of dementia, related to genetic vulnerability (7). This comorbidity has serious implications for the patients because of the impairment of social cognition followed by impairment of social functioning. We present the diagnostic and therapeutic challenges which the clinician may encounter in the treatment of this group of patients.

Diagnostic and therapeutic problems

Bipolar disorder itself can impair cognitive function and, as has already been stated, the course of the disorder may increase the vulnerability to further loss of cognitive function leading to symptoms typical of dementia. Dementia may also be an independent process (4). However, for the practicing clinician, encountering a patient with comorbid bipolar disorder and dementia in the treatment setting, the question that arises is how to manage the dual conditions effectively. As no special diagnostic guidelines for such comorbid patients have been developed as yet, we need to follow the criteria we already have to diagnose dementia and BPD according to ICD-10, DSM-IV/5 and, in the case of dementia, also the criteria used by neurologists. The basic elements of the dementia diagnosis

include: structural neuroimaging with non-contrast CT or MRI, screening for hypothyroidism, syphilis screening in patients at risk and routine laboratory tests, including complete blood count, serum electrolytes, glucose, blood urea, nitrogen/creatinine, folate and B12 (8). This should be followed by a neuropsychological examination. The most popular screening tool is the Mini Mental State Examination (MMSE). However, more detailed diagnostic tests are usually needed, including the California Verbal Learning Test, the Trail Making Test A and B, and the Category Fluency Test (9, 10). Further recommendations include: the Clock Drawing Test, Complex Figure Copying to diagnose, for example, apraxia, and other tests such as Judgment of Line Orientation or the Money Road Map Test (11, 12). So far no particular standard to diagnose cognitive functioning in BPD has been accessible, so similar batteries of tests could be proposed (6).

It is more difficult to find guidelines for the pharmacological treatment of such patients. Until recently there have been many interesting reports about the beneficial influence of treatment with lithium on cognitive functioning (13,14,15). Other interesting observations referred to memantine, which is a drug approved for Alzheimer disease. It may also show antimanic and mood-stabilizing effects in treatment-resistant bipolar disorder (16). Other recommendations for the treatment of patients with comorbid BPD and dementia include being cautious with the use of procholinergic drugs such as donepezil and rivastigmine, which can increase the risk of mania, avoiding antidepressants, which may precipitate elevated affective episodes and also avoiding benzodiazepines, which can decrease cognitive function. With regard to mood stabilisers, sodium valproate appears to be better tolerated than carbamazepine. Antipsychotics can be used very cautiously in cases of agitation (6). In our practice we have treated a patient, whose main complaint for many years was only recurrent affective episodes. However, there was a decline in cognitive and social functioning. On neuroimaging, subcortical cerebral atrophy was found and it was revealed that the ventricular system was enlarged symmetrically, with no shift. (Figure 1).



The battery of neuropsychological tests showed deficits in recent memory, attention and concentration. Affective episodes were effectively controlled by carbamazepine, so no change in mood stabilising treatment was proposed. No pro-cognitive treatment was administered initially. However, it was decided that the neuropsychological assessment should be repeated every 6 months (17). We also paid attention and encouraged the patient to control his diabetes, which could be an additional factor having an influence on cognitive functioning. A very important element in our therapeutic strategy was to improve the patient's social function through his participation in group psychotherapy and other activities, such as dance therapy, music therapy and art therapy. We also focused on the psychoeducation of his family.

Conclusions

Research analysis and our own example demonstrate that a practicing clinician may often face the specific comorbidity of BPD and dementia, especially when dealing with older patients. Discussion of this comorbidity is ongoing; there are currently no specific diagnostic and therapeutic guidelines for this group of patients. However, careful implementation of the diagnostic tools for BPD and dementia, which are already accessible, can be very valuable. When administering pharmacotherapy it is especially important to avoid toxicity and negative iatrogenic effects on the course of the two disorders. Further research in this field is needed. In addition to pharmacotherapy, treatment should also include the forms of interaction that improve cognitive functions. Cognitive rehabilitation may improve social functioning of these patients. It should be supported by group therapy, art therapy, music therapy, and dance therapy, as appropriate.

GP Comment

What have I learned from this paper?

It is increasingly recognised that bipolar disorder can be associated with cognitive impairment, even in younger people.

Cognitive issues are more complex in the elderly with pre-existing bipolar disorder and possible superimposed dementia.

Management strategies in this situation are unclear and there are risks from polypharmacy.

Non-pharmacological strategies are important and should be emphasized

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