COMENTÁRIO

The neuropsychiatric disturbances in demential disorders or behavioral and psychological symptoms of dementia

As alterações neuropsiquiátricas nos transtornos demenciais ou sintomas psicológicos e comportamentais na demência

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Neuropsychiatric disturbances in dementia, also known as behavioral and psychological symptoms of dementia (BPSD), have been increasingly intensively studied in terms of their clinical features, clinical correlations, neurobiology, and optimal management. This clinical conference published in the *Brazilian Journal of Psychiatry* (Caramelli e Bottino, 2007) provides a comprehensive update on the current state-of-the-science of understanding BPSD.

BPSD are of great importance in Alzheimer's disease (AD) and other dementias since they have a profound impact on the patient and the caregiver. When present, they may be associated with patient or caregiver abuse and they are a common precipitant of institutionalization. They increase the cost of care of dementia patients.

The nomenclature of BPSD is evolving. The advantage of a comprehensive term such as BPSD is that it calls attention to a set behaviors commonly associated with AD and other dementing disorders. The disadvantage of such terminology is that it appears to suggest that this is a distinct clinical entity whereas it is comprised of many symptom complexes that likely have different genetic, pathophysiologic, and treatment characteristics. For example psychosis, agitation, apathy, and mood disorders are all examples of BPSD; the pathobiology and therapeutic approaches to these common symptoms of dementia are different.

How best to classify the symptoms of BPSD is an evolving area of research. Factor analytic approaches and latent class approaches have suggested that symptoms can be usefully grouped into subtypes such as mood disorders, psychotic symptoms and frontally-mediated symptom complexes.

Diagnosis and assessment of BPSD are also areas of intensive research refinement. The neuropsychiatric inventory (NPI) is the most widely used tool for the characterization of BPSD. It is commonly used as an outcome measure in clinical trials of antidementia and psychotropic agents to assess the impact of treatment on BPSD. However, NPI scores are based exclusively on caregiver reports and there may be a role for clinical observation at least in some research and clinical settings. There are also behaviors that are not well characterized by the NPI including changes in sexual behavior and wandering. Summary scores on the hallucinations domain do not distinguish among types of hallucinations (e.g. visual hallucinations vs. auditory or tactile hallucinations) and in some cases this can be important; the diagnosis of dementia with Lewy bodies (DLB) has visual hallucinations as a cardinal feature.

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The high prevalence of BPSD is becoming increasingly apparent. Many studies now show that in excess of 90% of patients with AD exhibit at least some behavioral changes. Similarly, other dementing disorders are commonly associated with behavioral changes and in many cases these have diagnostic significance. For example, patients with frontotemporal dementia exhibit more euphoria and disinhibition whereas those with DLB exhibit more depression, visual hallucinations, and psychosis.

The clinical course and risk factors for BPSD are being clarified. A family history of mood disorders is often associated with depression in patients with AD. Apathy is the behavioral syndrome most highly correlated with cognitive dysfunction, particularly abnormalities of executive control. The presence of depression, psychosis or agitation, has been associated with an increased rate of cognitive decline though not with an increase in mortality.

The pathophysiology and neurobiology of BPSD are fascinating areas of research that have gained increasing investigator attention. Imaging studies have been particularly important in this regard and have shown a relationship between frontotemporal abnormalities and psychosis or agitation. Medial frontal abnormalities are highly correlated with apathy. The few postmortem studies that have been done confirm results suggested by imaging analyses. Genetic studies have begun to show associations between specific polymorphisms (especially those involving genes for neurotransmitters) and the presence of behavioral symptoms. The genetic contributions to behavioral abnormalities will likely be a major area of research in the coming years.

The treatment of BPSD is the arena of greatest importance and possibly the least clarity. The non-pharmacologic interventions are preferable when effective but often fall short of adequate control of BPSD. Moreover, rigorous studies of non-pharmacologic interventions are difficult to perform and few controlled trials are available to inform best practices. Pharmacologic management of symptoms such as psychosis and agitation have traditionally used antipsychotic agents. These drugs have been associated with an increased risk of stroke and of mortality making it difficult for physicians to use or patients and caregivers to accept these agents with confidence. In some cases there are no alternatives but new approaches to controlling these symptoms are needed. In addition, both positive and negative studies on the usefulness of anti-psychotic medications in psychosis and agitation associated with AD have been reported and the efficacy of these agents in the setting of dementia is uncertain. Similarly, positive and negative studies have been reported for both mood stabilizing anticonvulsants and antidepressant agents. Clinicians must choose the agent they posit is most likely to provide the patient with symptomatic relief but new studies are needed to provide guidance in this regard. Antidementia agents including cholinesterase inhibitors and memantine have both been shown to reduce behavioral disturbances and to reduce the emergence of new BPSD. Further investigation of the utility of new and emerging antidementia treatments may provide an alternative to the use of conventional psychotropic agents in dementing disorders.

This clinical conference in the *Brazilian Journal of Psychiatry* (Caramelli e Bottino, 2007) provides readers with a comprehensive update on BPSD that will assist them in providing optimal care to patients and caregivers as well as building a platform for understanding the evolving literature regarding the etiology, pathogenesis and treatment of BPSD.

REFERENCE

Caramelli P, Bottino CMC. Tratando os sintomas comportamentais e psicológicos da demência. J Bras Psiquiatr, 56(2):83-7, 2007.