

EDITORIAL

COGNITION AND DEPRESSION

There has been growing awareness that each major psychiatric illness may be associated with a distinct pattern of cognitive impairment. Cognitive impairment is likely to be a key factor affecting the subject's ability to function occupationally, and hence the timing of his or her return to work. There has been a renewal of interest in testing patients with depression on a broad range of neuropsychological task in the last two decades. These deficits involve both memory and executive function. It is now commonly accepted that depression is associated with a number of deficits in episodic memory and learning. This is a consistent finding and involves both explicit verbal and visual memory in patients with endogenous as well as exogenous depression (Austin et al., 2001). Implicit memory tasks on the other hand appear to be spared. It is well known that temporal lobe lesions typically disrupt episodic memory. As the hippocampal volume reduction is demonstrated in patients with major depression (Sheline et al., 1996), it may be that impaired memory function is associated with dysfunction of the hippocampus in depression. The impairment in executive function seems to be selective for "set shifting task".

Now an important issue, which needs to be addressed, is whether these neuropsychological deficits are simply epiphenomena of depression or more than that.

Patients with depression generally have difficulty with effortful (verbal recall) as compared to automatic memory (verbal recognition). Similarly dissociation between explicit (impaired) and implicit (intact) memory tasks seen in patient with depression was also a result of greater effort required for the former and more automatic performance of the latter.

This "effortful-automatic" hypothesis however has been undermined by other studies. (Austin et al., 1992).

Those who challenge the view that cognitive deficits are epiphenomenon of depression put following evidences for support. Few of the studies have reported that cognitive deficits do persist even after the recovery from depression. Trichard et al. (1995) in a controlled study of executive tasks performance in middle-aged subjects with severe depression reported improved performance on the verbal fluency task but not the stroop task upon recovery. Similarly, Sternberg and Javic. (1976) reported that improvement in immediate memory was related to degree of recovery of depression, while performance on learning and short-term memory tasks remains impaired even after recovery.

Another evidence is the presence of cognitive deficits even in young patients with mild depression.

With advances in the field of functional and anatomical imaging of brain we are rapidly gaining insight into the functional and neuroanatomical correlates of cognitive deficits and its relation to the affective manifestations.

Work done by Gratten et al. (1994) suggested an association between dorsolateral prefrontal cortex and frontal cognitive deficits in depression, with a relative sparing of lateral orbitofrontal and anterior cingulate region which have been associated with inhibitory control as reflected by performance on the stroop task. In few of the elderly patients the onset of depression may be an early symptom of the forthcoming severe cognitive decline amounting to the diagnosis of dementia. This depression may be a psychological reaction to perceived cognitive

decline in mild stages of Alzheimer's (Ott et al., 1992). If we believe that cognitive deficits are intrinsic expression of brain changes in depressive illness and not simply an epiphenomena, they can help us identify the functional neuropathology of depressive disorder.

It can thus be concluded that the cognitive deficits are an important component of affective illnesses like depression and are responsible for significant social and occupational morbidity. These should not merely be considered as phenomena secondary to lack of motivation. Further research in this area would make us wiser about the neuropathological basis of depression & also help in development of better antidepressant medication.

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