

Depression Following Left Hemisphere Stroke
(Abstract)

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To date, depression has not been well examined in an acute left hemisphere stroke population. This study was designed to document the nature and course of early depression in a group of left hemisphere damaged stroke patients and to determine the relationship between depression and a number of other variables. Fifty-nine left hemisphere stroke patients were evaluated using the Beck Depression Inventory and the Western Aphasia Battery at three specified times post-onset. Whereas 31% of the entire left hemisphere stroke group was found to be mildly-to-moderately depressed, 5% of the nonaphasic and 48% of the aphasic subjects were mildly-to-moderately depressed. Further, a significant negative correlation existed between final aphasia score and depression score, such that the more severe the aphasia, the more extensive the depression. Age (67 years), living situation (nursing home), and recovery (not recovered by 2 months post-discharge) were significant variables yielding higher proportions of depressed subjects. Type of aphasia and age had no significant effects. The development of diagnostic and treatment strategies for depression in aphasic patients should be a primary concern of all those involved in aphasia rehabilitation.

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DISCUSSION

- Q: I was impressed by your Beck I categories of inability to work, fatigability, indecisiveness, and irritability. I think it's very appropriate for these patients to be depressed after a stroke leading to aphasia. I was struck by the lack of significant differences between Broca's aphasic and Wernicke's aphasic patients. We're typically taught that Wernicke's aphasic patients have no insight into their problems and that they are not aware of the nature and extent of their deficits. You give some cause to reevaluate this notion.
- A: Yes, it is appropriate for patients to be depressed following aphasia-producing strokes, but to explain this as simply a reactive depression is unsatisfactory. In comparison with orthopedic patients and traumatic head-injury patients with similar physical or cognitive impairments, stroke patients are found to be more depressed. Also, the severity of depression has been shown to depend on site of lesion, thus implicating neural factors. I think it is justifiable to reevaluate the notion of Wernicke patients having no insight into their difficulties. This notion may largely be a function of reliance on propositional language interactions to signal depressive symptomatology. It is possible we have not tapped the proper modality.
- Q: Having wrestled with this issue of selecting a depression scale for a longitudinal study, I'd like you to elaborate just a little more on how you settled on the Beck.
- A: Other studies of stroke patients have used a variety of measures such as the Hamilton, the Zung, and psychiatric interview, and have demonstrated high correlations among all measures. The Beck was recommended to us by depression experts with whom we consulted. The Beck allowed us to categorize patients as less than mildly, mildly, or at least moderately depressed. Further, the Beck has been subjected to rigorous tests of standardization, reliability, and validity in its standard form as well as its slightly modified versions.
- Q: In your paper you said that the Beck Inventory has construct, content, and other validity. If it has these validities, then why does it have so many problems?

- A: The problems relate to the more general issue of recognizing and assessing depression following stroke rather than to any particular instrument. The symptoms that result from brain damage interfere with the traditional methods of studying depression, which rely heavily on propositional and affective language cues.
- Q: I was concerned about the relationship that you exhibited between the severity of the aphasia and the incidence of depression. I was wondering if you would relate that to the tendency for depression to compromise any kind of psychometric performance. Benson says depressed people will come out with lower IQ scores and I think that's worth thinking about.
- A: We did not attempt to factor out the effect of depression on WAB performance or demonstrate cause-effect relationships. They are clearly and systematically related.
- Q: When the aphasic persons were responding for themselves, do you think that they had any difficulty with the content of the items? I would think that language and cognitive problems might interfere with a person's inability to work, for example, and that they might erroneously appear depressed on that item.
- A: A number of findings in the literature help clarify this point by demonstrating that the emotional symptoms following stroke might be related to the pathophysiology of the lesion. I have referred, for instance, to the work of Robinson and Szetela (1980) who report that stroke patients are more depressed than trauma patients with comparable impairments. Furthermore, type of aphasia as well as side and site of lesion affect the amount of depression observed but not necessarily the concomitant physical and cognitive deficits. To complicate the issue, Robinson and his colleagues report that depression scores do correlate significantly with cognitive impairments in acute stroke patients (1983) but not in chronic stroke patients (1982). Above and beyond these data, a feature of the Beck helps address this issue. A patient must score at least a 13 to be considered mildly depressed. Some studies use a cutoff of 10 for this diagnosis. We chose the most conservative cutoff in order to be as sensitive and specific as possible.
- Q: As an activity for a spouse group I gave patients and spouses the Beck Inventory. The patients did not have good agreement with their spouses. I think it might be interesting to see if some groups are easier to rate than others, with regard to what the spouses said. Also, at that time psychiatrists were trying to do blood level studies because of the language difficulties of these patients.
- A: That is exactly what needs to be done. Biological markers used in conjunction with multidimensional, innovative clinical guidelines provided rich data in the management of depression in 5 stroke cases described by Ross and Rush (1981). They also reported good results with short-term antidepressant medication trials. This kind of work is encouraging.