REM Latency and Depressive Disorders

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When I finished my clinical research fellowship at the National Institute of Mental Health in 1966, I returned to Yale University imbued with a strong desire to pursue psychobiological research in psychiatry with a strong emphasis on the use of electroencephalographic sleep. Several active years of investigative work at Yale led to our 1972 publication proposing that shortened REM latency (time from the onset of sleep until the onset of the first REM period) was a key EEG sleep feature found in hospitalized depressed patients. After relocating our research group to the University of Pittsburgh, a new set of studies stimulated us to suggest that REM latency was associated with depressive illness sufficiently frequently to represent a "marker" of the illness. With an appropriate mixture of naiveté and determination, this manuscript was submitted for the A.E. Bennett Award offered by the Society of Biological Psychiatry in 1975. Much to our amazement, we won the first prize in clinical science, and the manuscript was published in 1976 in Biological Psychiatry.

This report directly spawned a cottage industry of EEG sleep research in depressive illness. The research finding itself went through several phases at other universities. The first phase of initial replication with high specificity was followed by a second phase of less specificity, with somewhat similar findings appearing in other psychopathological entities, usually related to affective illness. For us, perhaps the most significant aspect of this 1976 report was that it represented the high watermark of the notion of a simple, single-feature sleep abnormality in depression. Indeed, the subsequent 14 years have been highlighted by a widening of the net to include other EEG sleep features in depression and an increasing integration with neuroendocrine parameters and other biological rhythms.

Although the initial focus was placed on the cross-sectional aspects of the depressive episode itself, the more interesting but more difficult longitudinal approach has provided the necessary modification of the term "marker" and has led investigators to grapple directly with the state/trait question and the issue of markers of vulnerability to illness as well as markers of illness itself. While the finding of 1976 has not disappeared from our world view, recent publications such as "Two roads to rapid eye movement latency" and "Social Zeitgebers (timers) and biological rhythms: a unified approach to understanding the etiology of depression" represent a broader view of the relationship of EEG sleep and other circadian and neuroendocrine markers.