

### Brain Damage From Nondominant ECT

SIR: Studies of the effect of nondominant ECT on memory function continue to fail to recognize basic psychological and neurological distinctions between right brain and left brain function. In "ECT and Memory: Brief Pulse Versus Sine Wave" (May 1986 issue), Larry R. Squire, Ph.D., and Joyce A. Zousounis, M.A., tell us that "right unilateral ECT was associated with less memory impairment than bilateral ECT." In reality, there was no effect of ECT on the one test presumably aimed at testing right brain function (the visual memory diagram test). Therefore, in regard to right brain memory, which is more visual than verbal, we cannot say that unilateral shock was less damaging; it was merely less damaging to verbal memory.

None of the current studies of the impact of nondominant ECT on the right brain actually take into account the complex function of the nondominant brain. These functions include visual, spatial, and motor abilities; imagination, insight, initiative, and creativity; and emotional tone and personality. Often these functions take place on an automatic or unaware level.

Typically, the left brain dominates our analytic and verbal capacities, and thus we often remain tragically unaware of damage done to our more "unconscious" right brain. Thus, patients may complain more explicitly of damage to the left brain, while tending to deny malfunction in the right. This adds to the misperception that damaging the right brain is somehow less serious than damaging the left.

The distinctions between right and left brain function have been nicely reviewed in a popular book, *The Right Brain*, which offers an extensive scientific bibliography (1). I have made the same point more specifically in regard to ECT (2).

It makes no psychological or physiological sense to believe that placing electrodes over one side of the brain will somehow produce less damage than placing them over the other. We may even assume something potentially more tragic—that focusing all the energy in a more narrow or localized area on one side of the brain will tend to produce more harm than focusing it more diffusely over both sides. This assumption is confirmed by studies which show that ECT inflicted on the dominant side of the brain produces more damage to the verbal centers than does bilateral ECT (2). We may therefore assume that focusing the electrical energy on the right side does more damage to that area than would bilateral ECT.

The right brain, as a "silent area," somewhat resembles in its function that other great silent area, the frontal lobes. This is especially true in regard to such difficult-to-define functions as intuition, creativity, and personality. Nondominant ECT may not superficially appear to harm the individual as blatantly as does bilateral ECT, but its destructive impact should not be ignored.

#### REFERENCES

1. Blakeslee TR: *The Right Brain: A New Understanding of the Unconscious Mind and Its Creative Powers*. New York, Berkley Books, 1983
2. Breggin PR: *Electroshock: Its Brain-Disabling Effects*. New York, Springer, 1979

PETER R. BREGGIN, M.D.  
Bethesda, Md.