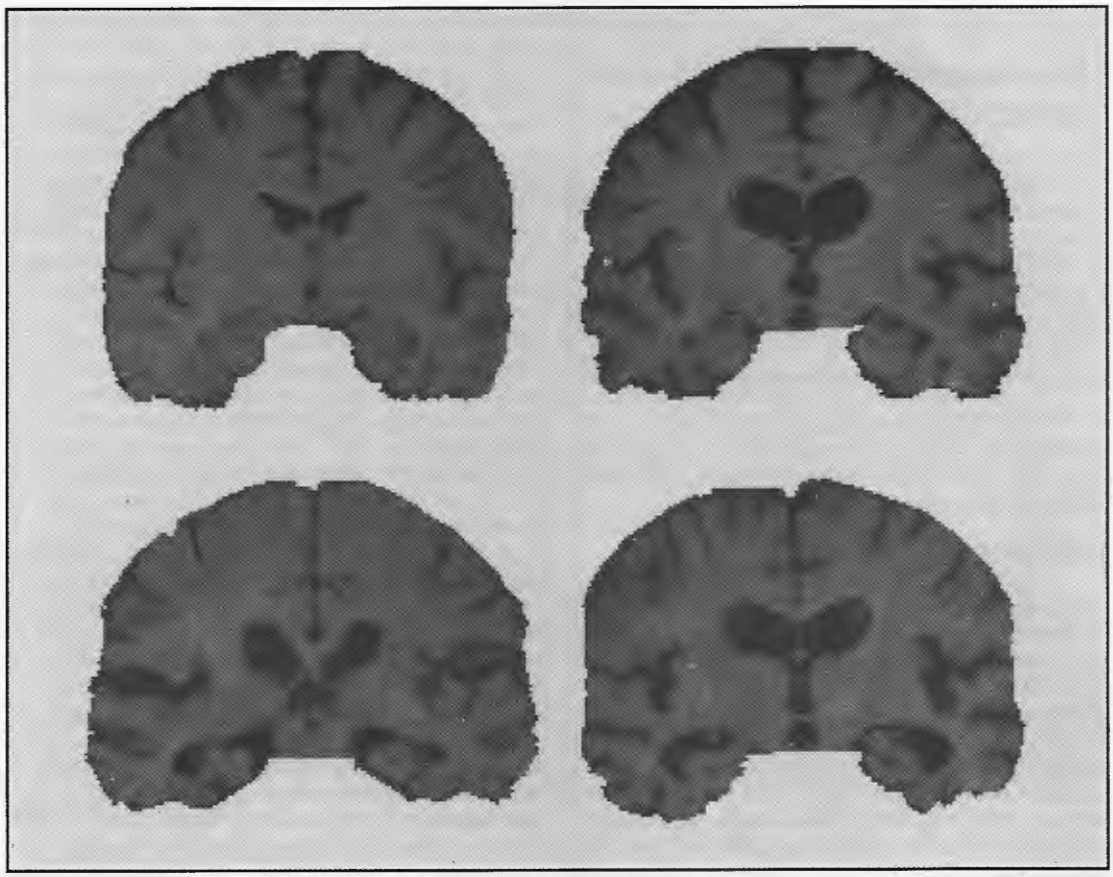

Figure 1. *T1-weighted MRI scans of the brain in the coronal plane just posterior to the amygdala show the temporal lobe (inferior-lateral) including the hippocampus and temporal horns of the lateral ventricles (inferior-medial). Top left: 30-year-old male with high function. The hippocampus is large and the temporal horns are barely visible. Top right: 69-year-old male with mild memory impairment, MMSE=28, global score=3/50,[23] who was having some difficulties at work; possible Alzheimer diagnosis. Note the enlarged bodies of the lateral ventricles, but minimal enlargement of the left temporal horn (viewer's right) and sylvian fissure (top of temporal lobe). Lower left: 74-year-old female with probable Alzheimer's disease of mild severity, MMSE=18, global score=15/50. Note the enlarged temporal horns and sylvian fissures and some shrinkage of the hippocampus. Lower right shows a 70-year-old male with moderate dementia, MMSE=17, global score=19/50. The temporal horns are enlarged and the temporal lobe shriveled. Diagnosis of Alzheimer's disease was confirmed at autopsy 5 months later.*

tification using this technique is not standardized. PET, measuring metabolic activity, and SPECT, measuring cerebral blood flow, both show characteristic decreases of activity in the temporal and parietal regions of the brain (Figure 2).[35-38] Combination of morphologic imaging and SPECT can further improve diagnostic power.[33,39] In the future, use of the more advanced imaging techniques and radioactive agents that can selectively tag neurotransmitter systems or neuropathology will be increased. The practical use of the range of imaging tools in clinical practice is not established, however.

ASSESSMENT OF DAT SEVERITY AND CLINICAL COURSE

An important component of dementia diagnosis is the assessment of severity. Numerous methods have been advanced to quantitate dementia severity. The Blessed Dementia Scale[24] was long considered the most reliable because it had been associated with the neuropathologic changes. Numerous measures of dementia severity have been developed and extensively studied, such as the Global Deterioration Scale,[40] the Clinical Dementia Rating scale,[41] the MMSE,[11] and systematic composites of other scales, which improve precision and reliability of the severity estimate.[23]

Quantification of dementia severity has been a controversial issue because of the lack of a fundamental physical standard against which to calibrate such scales; however, severity assessments can be translated to an absolute physical quantity: time course.[42,43] The time course can be used to estimate the duration of the illness and predict the future pattern of the patient's deterioration. Patients with DAT usually follow a typical downhill course that lasts about 8 years, on average, from the first symptoms until the most profound level of impairment, clearly a devastating decline relative to normal aging. The time course estimation provides the caregivers with a time line of expected changes and, thus, can help the family to prepare for the future.

PSYCHIATRIC CONCOMITANTS OF DAT

While searching for treatable dementias, the clinician must perform a complete mental