Normal Brain Scan. SPECT images are acquired up to an hour after the administration of 15-30 mCi of Tc99m HMPAO/ neurolite. The images are reconstructed in all the three orthogonal planes. The transaxial images on the left show normal distribution of the tracer in the cortex, subcortical structures and the cerebellum.
Transaxial images from a brain SPECT, showing a large perfusion defect in the left cortex, involving the frontal lobe and extending to the parietal and temporal lobes, from a recent infarct. Decreased activity seen in the right cerebellum is likely from crossed cerebellar diaschisis.
Transaxial images from a brain SPECT, showing bilateral perfusion defects (more so on the right) involving the parietal and temporal lobes, with preservation of activity seen in the sensory motor cortex, the subcortical structures and the cerebellum, consistent with Alzheimer’s disease.
Transaxial images from a brain SPECT, showing a bilateral frontal perfusion defects, likely to be consistent with Pick’s disease.
Transaxial images from a brain FDG-PET, showing marginal hypermetabolism in the post surgical cavity in the right parietal-temporal cortex, likely to be consistent with tumor recurrence.
Transaxial images from a brain FDG-PET, showing marginal hypermetabolism in the post surgical cavity, in the left frontal-parietal cortex, likely to be consistent with tumor recurrence.
Transaxial and coronal images from a brain interictal FDG-PET, showing hypometabolism in the right anterior temporal lobe, likely to be consistent with presence of seizure focus.
Transaxial and coronal images from a brain interictal FDG-PET, showing hypometabolism in the left anterior temporal lobe, likely to be consistent with presence of seizure focus.
Negative Brain Death Study. Blood flow is seen in the brain and the static views show intra-cerebral activity.
Positive Brain Death Study. No activity is seen in the brain on flow or the static images.
Positive Thallium Brain SPECT. The ring enhancing lesion in this AIDS patient is likely to be lymphoma rather than toxoplasmosis.
Positive Diamox Brain SPECT. The top row of transaxial images are images at rest. The bottom row of axial images were obtained after the administration of 1gm of IV diamox. The images show a predominantly reversible cerebral perfusion defect in the left cortex, suggestive of diamox induced ischemia.