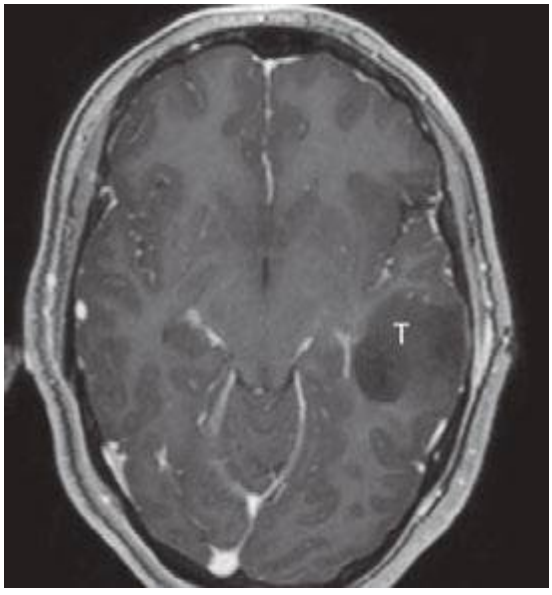
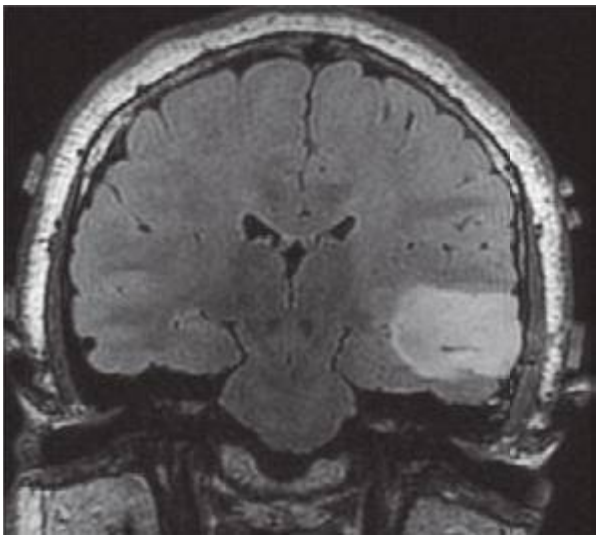


A



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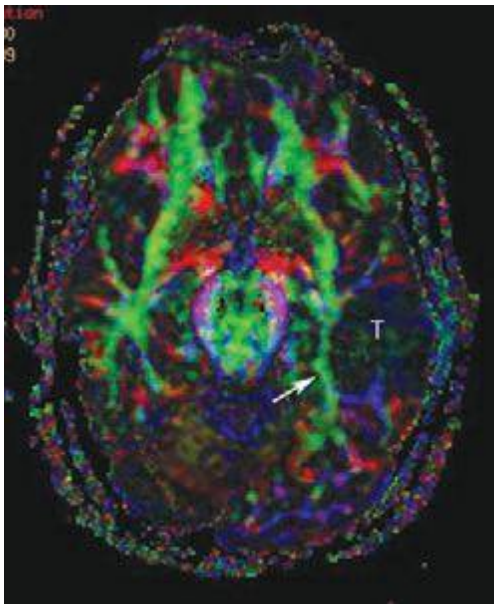

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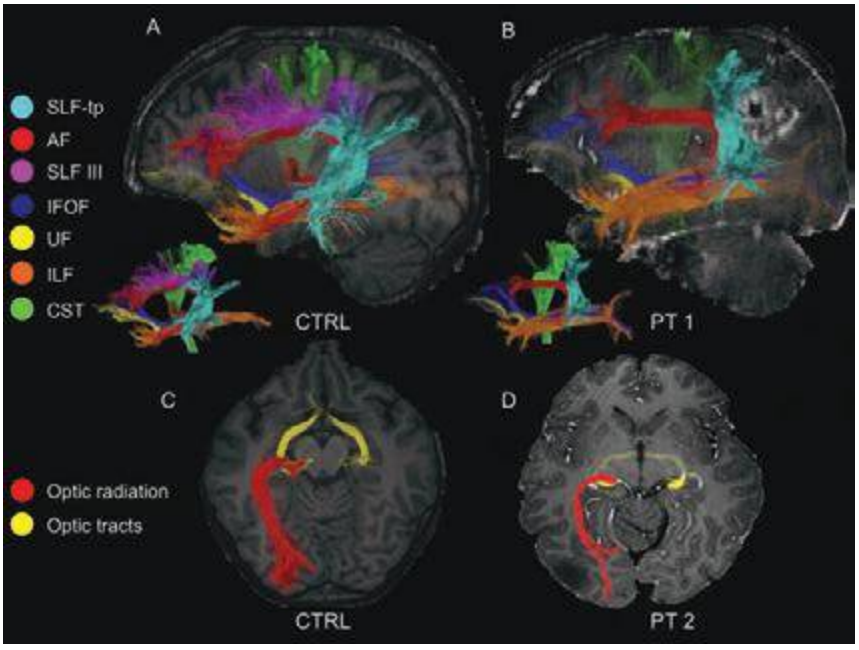

D

FIGURE 440e-6 Diffusion tractography in cerebral glioma. Associative and descending pathways in a healthy subject (***A***) and in a patient with parietal lobe glioblastoma (***B***) presenting with a language deficit: the mass causes a disruption of the arcuate-SLF complex, in particular of its anterior portion (SLF III). Also shown are bilateral optic tract and left optic radiation pathways in a healthy subject (***C***) and in a patient with left occipital grade II oligoastrocytoma (***D***): the mass causes a disruption of the left optic radiation. *Shown in neurologic orientation, i.e., the left brain appears on the left side of the image.* AF, long segment of the arcuate fascicle; CST, corticospinal tract; IFOF: inferior fronto-occipital fascicle; ILF, inferior longitudinal fascicle; SLF III, superior longitudinal fascicle III or anterior segment of the arcuate fascicle; SLF-tp, temporo-parietal portion of the superior longitudinal fascicle or posterior segment of the arcuate fascicle; T, tumor; UF, uncinated fascicle. *(Part D courtesy of Eduardo Caverzasi and Roland Henry.)*

been developed and may prove useful for imaging the brain and other organs without the radiation exposure of CT. More recent PET ligand developments include amyloid tracers, such as Pittsburgh compound B (PIB) and 18-F AV-45 (florbetapir), and tau PET tracers, such as 18F-T807 and T808. Studies have shown an increased percentage of amyloid deposition in patients with Alzheimer's disease compared with mild cognitive impairment and healthy controls; however, up to 25% of cognitively "normal" patients show abnormalities on amyloid PET imaging. This may either reflect subclinical disease processes or variation of normal. Tau imaging may be more specific for Alzheimer's disease, and clinical studies are under way.

MYELOGRAPHY

TECHNIQUE

Myelography involves the intrathecal instillation of specially formulated water-soluble iodinated contrast medium into the lumbar or cervical subarachnoid space. CT scanning is typically performed after myelography (*CT myelography*) to better demonstrate the spinal cord and roots, which appear as filling defects in the opacified subarachnoid space. *Low-dose CT myelography*, in which CT is performed after the subarachnoid injection of a small amount of relatively dilute contrast material, has replaced conventional myelography for many indications, thereby