

Fungal Infections Invasive fungal infections of the CNS are rare but can be devastating. Yeast, molds that form hyphae, and dimorphic fungi (yeast at body temperature and molds at ambient temperature) are the 3 types of fungi that can cause stroke. In chronic fungal meningitis, which is most often caused by yeasts, several mechanisms can cause stroke including vasculopathy, venous outflow obstruction, and arteritis of small vessels.² Yeasts also may form focal abscesses in the brain parenchyma that have a tendency to bleed. Molds, unlike yeasts tend to directly invade blood vessel walls causing arteritis or mycotic aneurysms. Yeasts The most common CNS yeast infection is *Cryptococcus* spp, particularly in immunocompromise. In the developed world, approximately 50% of cases are associated with HIV. An immunosuppressed state such as post solid-organ transplant, corticosteroid use, sarcoidosis, and hepatorenal failure also are risk factors, but notably, 13% to 18% of people with *Cryptococcus* infection may be immunocompetent.¹² *Cryptococcus* invades the leptomeninges and brain parenchyma, causing meningitis as well as abscesses. In a small series, ischemic stroke complicated cryptococcal meningitis in 8 of 32 (26%) individuals.¹³ These strokes were mostly multiple, lacunar, and tended to affect the basal ganglia. Other imaging findings of *Cryptococcus* were often present, including meningeal enhancement in 50% and basal exudates in 13% (Figure 2).¹³ Among people with cryptococcal infections, those who had a stroke had a higher rate of disabling neurologic deficits than those who did not. The mechanism by which cryptococcal infection causes stroke is related to vessel compression and inflammation by basal meningeal exudate with resulting stenosis, necrosis, and thrombosis.⁸ Infarcts are often found in the basal ganglia, thalamus, and internal capsule because the circle of Willis is often encompassed by heavy inflammatory exudate.⁸