COMMON LOCALIZING MANIFESTATIONS OF BRAIN TUMORS

Tumor Site	Findings	Common Primary Tumor Types*
Anterior corpus callosum	Cognitive impairment	Astrocytoma Oligodendroglioma
Basal ganglia	Hemiparesis (contralateral), movement disorders	Astrocytoma
Brain stem	Unilateral or bilateral motor or sensory loss, cranial nerve deficits (eg, gaze palsies, hearing loss, vertigo, palatal paresis, facial weakness), ataxia, intention tremor, nystagmus	Astrocytoma (most often juvenile pilocytic astrocytoma)
Cerebellopontine angle	Tinnitus and hearing loss (both ipsilateral), vertigo, loss of vestibular response to caloric stimulation If tumor is large, ataxia, loss of facial sensation and facial weakness (both ipsilateral), possibly other cranial nerve or brain stem deficits	Acoustic neuroma Meningioma Schwannoma
Cerebellum	Ataxia, nystagmus, tremor, hydrocephalus with suddenly increased intracranial pressure	Astrocytoma Ependymoma Medulloblastoma
2nd cranial (optic) nerve	Loss of vision	Astrocytoma (most often juvenile pilocytic astrocytoma)
5th cranial (trigeminal) nerve	Loss of facial sensation, jaw weakness	Meningioma
Frontal lobe	Generalized or focal (contralateral) seizures, gait disorders, urinary urgency or incontinence, impaired attention and cognition and apathy (particularly if tumor is bilateral), hemiparesis Expressive aphasia if tumor is in dominant hemisphere Anosmia if tumor is at base of lobe	Astrocytoma Oligodendroglioma
Hypothalamus	Eating and drinking disorders (eg, polydipsia), precocious puberty (especially in boys), hypothermia	Astrocytoma
Occipital lobe	Generalized seizures with visual aura, visual hallucinations, hemianopia or quadrantanopia (contralateral)	Astrocytoma Oligodendroglioma

COMMON LOCALIZING MANIFESTATIONS OF BRAIN TUMORS—Continued

Tumor Site	Findings	Common Primary Tumor Types*
Parietal lobe	Deficits in position sensation and in 2-point discrimination (contralateral), anosognosia (no recognition of bodily defects), denial of illness, hemianopia (contralateral), generalized or focal seizures, inability to perceive (extinguishing of) a contralateral stimulus when stimuli are applied to both sides of the body (called double simultaneous stimulation) Receptive aphasia if tumor is in dominant hemisphere	Astrocytoma Oligodendroglioma
Pineal region	Paresis of upward gaze, ptosis, loss of pupillary light and accommodation reflexes, sometimes hydrocephalus with suddenly increased intracranial pressure	Germ cell tumor Pineocytoma (rare)
Pituitary or suprasellar region	Endocrinopathies, monocular visual loss, headache without increased intracranial pressure, bitemporal hemianopia	Craniopharyngioma Pituitary adenoma Pituitary carcinoma (rare)
Temporal lobe	Complex partial seizures, generalized seizures with or without aura, hemianopia (contralateral), mixed expressive and receptive aphasia or anomia	Astrocytoma Oligodendroglioma
Thalamus	Sensory impairment (contralateral)	Astrocytoma

*Similar manifestations may result from brain parenchymal metastases or from tumors around the dura (eg, metastatic tumors; meningeal tumors such as meningiomas, sarcomas, or gliomas) or skull lesions (eg, granulomas, hemangiomas, osteitis deformans, osteomas, xanthomas) that compress the underlying brain.