A 10-year-old, spayed domestic shorthaired cat presented with a 1-month history of walking in circles to the left and reluctance to go outside. She had previously been an indoor–outdoor cat and would readily spend a significant amount of time outside, but recently preferred to stay indoors and was often found hiding in the closet. The owners reported that she was eating, drinking, and eliminating normally.

Physical examination was unremarkable. On neurologic examination, the gait and segmental reflexes were within normal limits. Assessment of cranial nerves revealed an absent menace response in the right eye with normal palpebral and pupillary light reflexes in the left eye. The cat was circling propulsively to the left and had diminished postural responses in the right thoracic and pelvic limbs. The remainder of the neurologic examination findings were within normal limits.

Routine blood work (complete blood count, chemistry panel, and FeLV and FIV testing) and urinalysis results were all normal. Three-view thoracic radiographs were within normal limits. Magnetic resonance imaging (MRI) of the head was performed. T2-weighted (FIGURE A), T1-weighted (FIGURE B), and T1-weighted postcontrast (gadolinium; FIGURE C) images were obtained.

1. What is the neuroanatomic diagnosis based on the neurologic examination?
2. Describe the lesion seen on MRI.
3. What is the presumptive diagnosis?
4. What is the prognosis?
Answers and Explanations

1. The normal gait with propulsive circling to the left suggests a lesion in the left prosencephalon. This presumption is supported by the absent menace response in the right eye and the right-sided postural deficits.

2. A mass lesion is seen dorsally in the left cerebral hemisphere. The mass is extra-axial and strongly contrast enhancing. A significant mass effect with deviation of the falx cerebri to the right side is evident. Associated with the mass is a large, cystic cavity filled with fluid similar in signal intensity to cerebrospinal fluid (CSF). FIGURE D is a T2-weighted image, in which fluid, edema, and CSF appear “hyperintense,” or white. T2 imaging is most useful in highlighting areas of increased water (edema), inflammation, or other pathologic processes. FIGURES E and F are T1-weighted images after administration of a paramagnetic contrast agent (gadolinium). In T1 images, water appears “hypointense,” or dark, relative to the surrounding tissue. T1 images are very useful for defining normal anatomy. Further delineation of the margins of the mass using contrast medium helps with surgical management and radiation treatment.

3. The presumptive diagnosis is cystic meningioma. Meningioma is the most common intracranial tumor in cats, accounting for 58.1% of all feline intracranial neoplasms in a large retrospective of 160 cats. However, none of the tumors studied in that report had a cystic component. In dogs, cystic meningiomas are relatively common, accounting for 29 of 112 tumors reported. The prognostic significance of the cystic compartment is therefore unknown in cats, although in my experience with cystic meningiomas in dogs, these neoplasms tend to be less responsive to chemotherapy and radiation.

4. The prognosis for cats with meningioma is considered good to excellent after surgical removal of the tumor because these tumors can often be readily removed en masse. Median postoperative survival is often greater than 2 years.

References