

long by air conduction as by bone conduction. If hearing by bone conduction is longer than by air conduction, a conductive hearing loss is suggested. The Weber test compares the patient's hearing by bone conduction in the two ears. The fork is placed at the center of the forehead, and the patient is asked where he or she hears the tone. Normal subjects hear it in the center of the head, patients with unilateral conductive loss hear it on the affected side, and patients with unilateral sensorineural loss hear it on the side opposite the loss. Ooscopic examination may reveal impacted cerumen as a cause of conductive hearing loss.

### Causes of Hearing Loss

The bilateral hearing loss commonly associated with advancing age is called *presbycusis*. Presbycusis is not a distinct disease entity but rather represents multiple effects of aging on the auditory system. Presbycusis may include conductive and central dysfunction, although the most consistent effect of aging is on the sensory cells and neurons of the cochlea; as a result, higher tones are lost early.

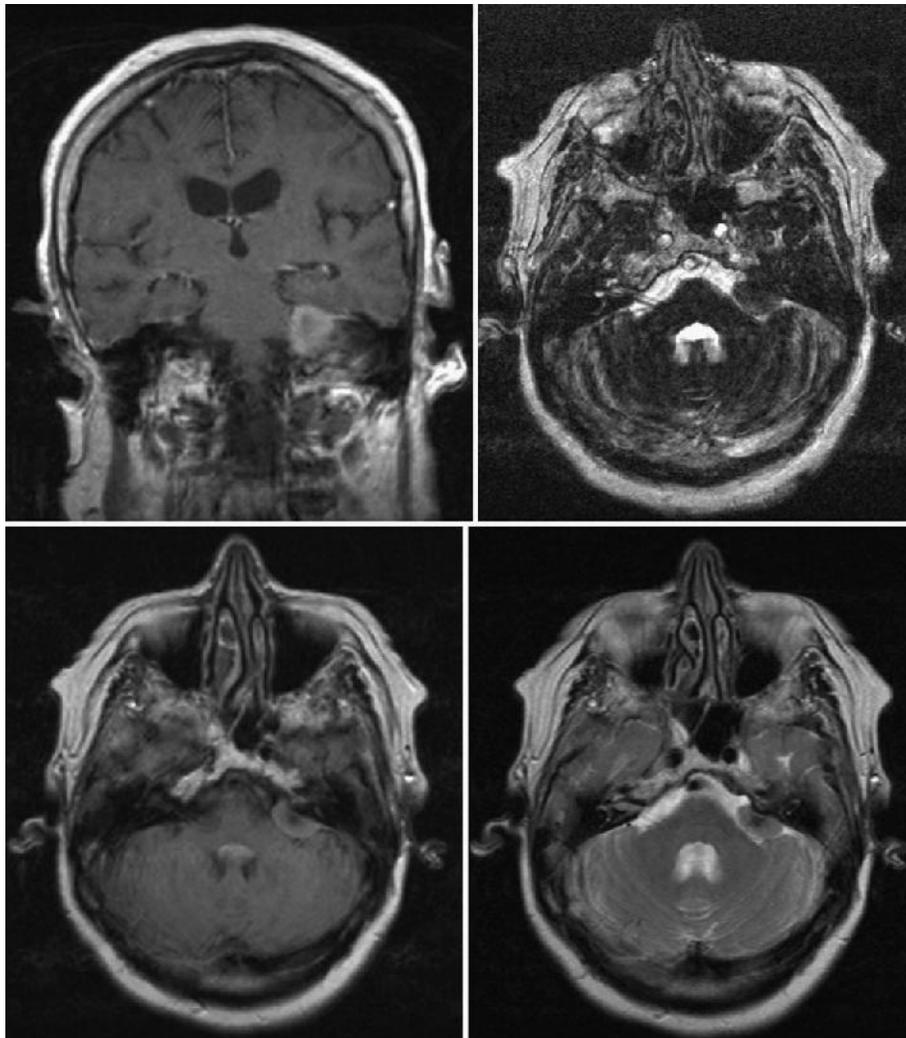
*Otosclerosis* is a disease of the bony labyrinth that usually manifests itself by immobilizing the stapes and thereby producing a

conductive hearing loss. Seventy percent of patients with clinical otosclerosis notice hearing loss between the ages of 11 and 30. There is a family history of otosclerosis in approximately 50% of cases. *Stapedectomy*, a procedure in which the stapes is replaced with a prosthesis, is effective in correcting the conductive component of hearing loss.

A lesion of the cerebellopontine angle, such as a vestibular schwannoma, often causes unilateral hearing loss that progresses slowly (Table 112-2); symptoms are caused by compression of the nerve in the narrow confines of the canal (Fig. 112-9). The most common symptoms associated with vestibular

**TABLE 112-2 CAUSE OF ACUTE UNILATERAL SENSORINEURAL DEAFNESS**

COCHLEAR	RETROCOCHLEAR
Idiopathic (85%)	Demyelination
Trauma	Vestibular schwannoma (usually gradual onset)
Meniere's disease	Stroke
Lyme's disease	
Syphilis	
Autoimmune disease	



**FIGURE 112-9** Magnetic resonance imaging scan of the brain showing coronal and axial views of a tumor of the left cerebellopontine angle, consistent with a schwannoma.