Case Study 37
Ethmoid Sinusitis

AB is a 70-year-old man who had chronic pain around his left eye. He described this pain as an aching with some intermittent pressure component. He had been seen by several ophthalmologists with diagnoses ranging from allergy to dry eye. Clinical examination was basically unremarkable, and a plain film sinus x-ray had been read as normal.

Echography was performed and revealed a large number of high reflective signals from the left ethmoid complex that decreased in height towards the posterior wall of the sinus (Fig. 1). This was interpreted as a non-air-filled sinus. He was referred for ENT evaluation, but the examination was normal, and plain film sinus x-rays were reviewed by the otolaryngologist and said to be unremarkable. Finally, a sinus CT scan was performed and verified the presence of ethmoid sinus opacification (Fig. 2).

The ultrasound spikes are nonspecific, and only a CT scan can distinguish a mass in the sinus versus other pathology. Rarely, malignancy can originate in the sinuses or invade them secondarily. Such pathology would be suspected on A-scan by the intensity of signals and their depth into the sinus. There is often bone destruction with malignant processes, and this effects the A-scan by allowing deeper penetration of the sound beam into the sinus cavity than is normally detected when the bone is intact.

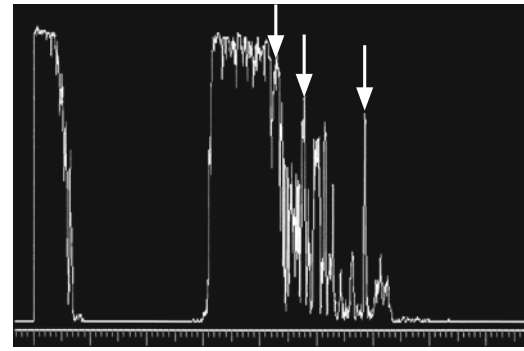

FIG. 1 A-scan of ethmoid sinusitis (*vertical arrows*)

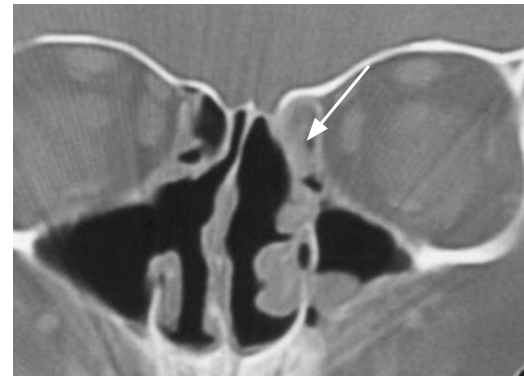

FIG. 2 CT scan of ethmoid sinus opacity (*arrow*)

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