INTRODUCTION

• It is very important to identify the underlying cause of symptoms such as tinnitus and hearing loss. If these symptoms present unilaterally, retrocochlear lesions, vascular lesions or inner ear anomaly should be taken into consideration in the diagnostic process.

• Many diagnostic tools have been suggested to evaluate retrocochlear lesions. However, there is no single novel method to evaluate all lesions causing unilateral ear symptoms easily.

• Recently, three dimensional fast imaging employing steady state acquisition (3D-FIESTA) sequence in unilateral hearing loss or tinnitus.

METHODS AND MATERIALS

The authors retrospectively reviewed the charts of 260 patients with unilateral tinnitus and hearing loss who visited Hanyang university hospital from Feb. 2011 to Dec. 2011 and underwent 3D-FIESTA temporal bone imaging.

• Patients who have dizziness or Meniere’s disease are excluded.

RESULTS


• In 3D-FIESTA image results, acoustic neuroma was the most common retrocochlear lesion in the patients with unilateral ear symptoms in this study. Twelve patients were diagnosed with acoustic neuroma, and four patients were confirmed with enlarged vestibular aqueduct syndrome. Other lesions such as congenital anomaly, vascular lesion, and acute infarct could be screened with 3D-FIESTA image.

CONCLUSIONS

• 3D-FIESTA MR is highly sensitive and cost effective method for differential diagnosis of hearing loss and tinnitus. 3D-FIESTA MR image is a useful diagnostic tool as screening for cochlear and retrocochlear lesions.

• So, 3D-FIESTA MR image is useful diagnostic tool as screening for unilateral auditory dysfunction.