

## Unilateral sensorineural hearing loss secondary to internal auditory canal stenosis in a 12-year old female: A therapeutic dilemma

Christen-Zen I Sison

University of Santo Tomas Hospital, Philippines

Unilateral hearing loss is a significant complaint that is often encountered in otolaryngology practice and if left uninvestigated, it may have dire consequences. In this case, we encountered a rare condition of a 12-year old girl who initially presented with progressive unilateral sensorineural hearing loss, with no evidence of facial palsy. Neuroimaging demonstrated stenosis of the internal auditory canal. Isolated cases of congenital primary stenosis of the internal auditory canal (IAC) is a rare condition although other temporal bone conditions may also accompany this condition. Even though most patients exhibit sensorineural hearing loss, there are also cases wherein the hearing is normal in patients with stenotic canals, leading several studies to investigate the causal link between this anatomic abnormality and deafness. Typical radiographic findings are described in this case and the relevant embryological origins of the ear are traced in detail. The association of isolated IAC stenosis and hearing loss in this case suggests a correlation between stenosis and deafness. Most of the literature is focused on the effect of IAC stenosis on the outcome of cochlear implantation. There is currently no consensus regarding the therapeutic management for these types of cases since there are only a few reports in literature.

Significant one-sided hearing misfortune or single-sided deafness, SSD, makes hearing appreciation extremely troublesome. With discourse and foundation commotion introduced at a similar level, people with one-sided deafness were found to hear just around 30–35% of the discussion. An individual with SSD needs to put forth more attempt when speaking with others. At the point when a patient can get notification from just a single ear, and there are constrained prospects to make up for the impediment, e.g., changing listening position, bunch conversations and dynamic listening circumstances become troublesome. People with significant one-sided hearing misfortune are regularly seen as socially off-kilter because of steady endeavors to augment hearing prompting socially one of a kind non-verbal communication and peculiarities. Adjustment in the focal sensory system through “neural-versatility” or natural development after some time doesn’t improve the presentation of monaural listening.[2] notwithstanding customary techniques for improving the exhibition of the impeded ear, there are likewise portable hearing assistants adjusted to

one-sided hearing misfortune which are of exceptionally restricted adequacy because of the way that they don’t reestablish the binaural hearing capacity. When wearing sound system earphones, individuals with one-sided hearing misfortune can hear just one channel, thus the panning data (volume and time contrasts between channels) is lost; a few instruments might be heard better than others in the event that they are blended prevalently to one channel, and in extraordinary instances of sound creation, for example, complete sound system detachment or sound system exchanging, just piece of the synthesis can be heard; in games utilizing 3D sound impacts, sound may not be seen suitably because of going to the handicapped ear. This can be remedied by utilizing settings in the product or equipment—sound player, OS, enhancer or sound source—to change parity to one channel (just if the setting downmixes sound from the two channels to one), or there might be an alternative to out and out downmix the two channels to mono. Such settings might be accessible by means of the gadget or programming’s openness highlights.