Pediatric sudden sensorineural hearing loss (SSNHL) : experience in a pediatric ENT emergency care center.

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Pediatric SSNHL is a rare entity. Etiologies are most often unknown and may be different from adults: anatomic abnormalities seem more frequent. Steroids treatment shows an audiological benefit for half of the patients.

We analysed data of 35 patients regarding clinical symptoms, audiological characteristics, diagnostic investigations and treatment outcomes. Tinnitus and vertigo were frequently associated with SSNHL. 29 patients received systemic steroids and 3 received intra-tympanic steroids. 21% had total hearing improvement, 31% had partial improvement. Etiology was unknown (24), viral of unknown type (4), anatomic abnormality (2), labyrinthitis (1), intra-cochlear hemorrhage (1), traumatic perilymphatic fistula (1), auto-immune (1) and ototoxicity (1).

Introduction:
Pediatric sudden sensorineural hearing loss (SSNHL) is an underappreciated issue in pediatric patient care and the current guidelines for its management refer to adults. Data on the pediatric population are limited.

Goals of the poster:
1. To share our experience in children with SSNHL.
2. To evaluate clinical characteristics, etiologies, management and treatment outcomes in the pediatric population.

Matériels et Méthodes:
SSNHL definition:
Hearing loss of more than 30 dB across 3 contiguous frequencies with a rapid onset in < 3 days.

We performed a retrospective chart review of all children registered for SSNHL between August 2004 and September 2017 in a tertiary care pediatric hospital.

Results:
35 patients were included.
Male/female ratio was 15:20.
Mean age was 12 years old (range 4-18). 34 were seven or older.
Hearing loss was left-sided for 18 patients, right-sided for 12, and bilateral for 5 patients.
20 patients consulted within 7 days of onset of hearing loss. Audiograms curve types were flat for 22 ears and descending for 18 ears.
Degree of hearing loss varied from mild to profound across frequencies.

29 patients received systemic steroids and 3 intra-tympanic steroids.
4 patients received valaciclovir.

Diagnostic investigations
7 had suspicious family history.
18 had blood tests: 1 had leukocytosis.
16 had vestibular tests: 10 were abnormal.
6 had ophthalmological examination: 1 had uveitis.

Conclusion:
SSNHL can affect speech and language development in children. Appropriate diagnostic and therapeutic management remain to be defined. Larger cohorts studying incidence, etiology and treatment are needed to establish guidelines.

I will soon work on intra-cochlear fluids and steroids bioavailability in the inner ear, in a Master degree research project.

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