Autistic spectrum disorder (ASD) and hearing loss may coexist in children. The diagnosis of ASD often leads to delayed audiological evaluation, delayed amplification, and non-favorable outcomes regarding communication and social and academic interaction. Early diagnosis of both disorders is important for appropriate management.

ASD is a pervasive developmental disorder affecting social interaction, communication, and behavior. ASD encompass a wide range of behavioral and developmental characteristics. These disorders on the spectrum include: Autism, Asperger’s disorder, Pervasive Developmental Disorder Not Otherwise Specified (PDD-NOS), Rett’s disorder, and Childhood Disintegrative disorder. The prevalence of hearing loss in children with autism demonstrates a wide variation. Auditory related symptoms are most frequently documented during the diagnostic process of ASD. The single diagnosis of one disorder (either ASD or hearing loss) significantly delays the diagnosis of the other.

What are the results of the audiological test battery used in the evaluation of children with ASD? How sooner is ASD diagnosed before hearing loss and vice versa?

Most of the children suffered by autistic disorder (Fig 1). Only 4 children were capable to be examined with pure tone audiogram. Normal hearing threshold was found in 26 (54%) children, 17 were diagnosed with ASD while nine were referred for further assessment due to delayed speech and language development. In 7 (14.5%) children bilateral sensorineural hearing loss was found (2 children with Asperger syndrome and five children with autistic disorder) and fifteen (31%) were diagnosed with conductive hearing loss (Fig 2,3).

The diagnosis of hearing impairment had been made on average 15 months after the diagnosis of ASD, while the diagnosis of ASD was delayed by an average of 12 months after the audiological assessment (Fig 4).