Co-morbidity of Hearing Loss and Autism
Interdisciplinary Collaboration

Early Hearing Detection and Intervention
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Work Group - URLEND Trainees

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Demographics

Autism

1 in 68 children diagnosed\(^1\)

Hearing Loss

2 -3 in every 1000 children in the US are diagnosed with a detectable level of hearing loss in one or both ears\(^1\)

Autism and Hearing Loss

- \~2 in every 88 diagnosed with bilateral permanent hearing loss later diagnosed with ASD\(^2\).
- 7% of children with hearing loss have dual diagnosis of ASD\(^3\)
Indicators for Further Evaluation\textsuperscript{4,5,6}

- Failed Newborn Hearing Screening
- Absence of or reduced eye contact
- Insistence of routines and sameness
- Repetitious play
- Challenges interacting with peers
- Behaviors that disrupt daily living
Genetics Information

20% of ASD diagnoses\textsuperscript{7}
Up to 60% of congenital hearing loss\textsuperscript{8}

Syndromes

Down syndrome
22q11 (Velocardiofacial syndrome)
CHARGE
Fragile X
Other rare syndromes (Myhre, ichthyosis, Klinefelter, etc.)\textsuperscript{9}
Autism Spectrum Disorders (DSM 5 Diagnostic Criteria\textsuperscript{10})

**Persistent deficits in social communication and social interaction across multiple contexts, currently or by history (3/3)**
- Deficits in social-emotional reciprocity
- Deficits in non-verbal communication
- Deficits in developing relationships

**Restricted, repetitive patterns of behavior, interests, or activities (2/4) currently or by history**
- Stereotyped or repetitive movements
- Insistence on sameness
- Restricted, fixated interests
- Hyper/hypo reactivity or unusual sensory interests
Screening Children With Hearing Loss for Autism

Deficits in social/communication and social interaction
- Limited give/show behavior
- Shifting of signing space
- Poor understanding/use of integrated ASL facial grammatical features

Restricted/repetitive patterns of behavior
- Echolalia in sign or spoken language
- Idiosyncratic gestures
- Palm rotation errors
Evaluation

Hearing Assessment
Cognitive Assessment
Language Assessment
Self Care Skills Assessment
ASD Specific Assessments
  ADOS 2
  ADI 2
The Interdisciplinary Team

Parents
Primary Care Physician
Speech Language Pathologist
Audiologist
Psychologist
Genetic Counselor & Geneticist
Occupational Therapist
Physical Therapist
Educators
Services A Child May Receive

Private Service Agencies

School Services

Government Programs

TeleHealth/TeleHome
Therapies and Interventions

- Applied Behavioral Analysis
- Hearing Amplification
- Augmentative and Alternative Communication (AAC)
- Adaptive and Assistive Technologies
- Co-Treatment of Therapy Services
- Speech and Language Therapy
Resources

Autism Navigator

Facebook

Hands & Voices

Gallaudet University

Family Voices

Autism Speaks

American Society for Deaf Children

American Speech-Language Hearing Association
In Summary

“Because a child may have hearing loss and autism, sorting out the relative contributions of each requires input not only from audiologists and speech-language pathologists, but also from parents, mental health professionals and educators on a team. This teamwork is essential to making appropriate diagnoses, and is even more critical in developing and implementing a treatment plan that results in each child reaching his or her full potential and achieving an optimal quality of life.”

- Jaynee A. Handeslman, PhD, CCC-A
References


Resources and References


