



## NEUROSENSORY HEARING LOSS IN CHILDREN WITH BACTERIAL MENINGITIS

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**Introduction.** Bacterial meningitis (BM) is one of the causes of acquired neurosensory hearing loss in children. In patients undergoing BM, hearing loss is accompanied by ossification of the structural inner ear.

**Methods:** A prospective study of children who were hospitalized in the period from 2015 to 2017 was conducted in the City Children's Infectious Diseases Hospital, with a diagnosis of BM (n = 65) and enterovirus meningitis (EM, n = 38). Examination of children included collecting anamnesis, studying the pathology of ENT organs, assessing the state of the auditory function. The average hospital stay is  $14 \pm 5.3$  bed-days.

**Results:** In analyzing the etiological structure of BM, N.meningitidis plays a leading role 24%, Str. pneumonia 14.5%. BM of unknown etiology amounted to 61.5%, serous meningitis of unknown etiology - 57%, EM - 43%. When studying the age structure, children with bacterial meningitis were more often sick up to 5 years, and with serous meningitis older than 5 years. Using screening studies using short-hearing auditory evoked potentials, we were able to identify impaired hearing in 6 children with bacterial meningitis. During the study after 3 months Neurosensory hearing loss of 2–3 degrees was established, with repeated examination after 2 months. Neurosensory hearing loss of 2–4 degrees, with ossification of the cochlea, auditory prosthetics were recommended. 20 days after discharge, bilateral sensory deafness of 3–4 was found without ossification of the cochlea, and cochlear implantation was performed. After 2 months. Neurosensory hearing loss of 2–3 degrees was established, observation by an audiologist was recommended. A sensory deafness of 1st degree was found, it was observed by an audiologist.

**Conclusions:** According to the results of our studies of all examined patients after meningitis for the presence of hearing loss, patients with a diagnosis of EM did not reveal a hearing loss. Among patients diagnosed with bacterial meningitis, six had a sensorineural hearing loss. Thus, it becomes obvious that children with bacterial meningitis are at high risk of developing hearing impairment. All patients who have suffered bacterial meningitis should be advised to consult a neurologist and audiologist, with a screening audiological study within 1 month after discharge.