

Management of Badhirya –congenital sensory neural hearing loss with Ayurveda- A Rare Case Report

Chandani D. Chauhan¹, D.B. Vaghela²

¹M.S. Scholar, ²Associate Professor & I/C HOD.,
Shalakya Tantra Department, IPGT & RA Jamnagar, Gujarat, India

Abstract:

Sensory neural hearing loss occurs when there is a problem in the sensory apparatus - cochlea (sensory) or in the pathways of conduction of nerve impulses to the brain. Sensory neural hearing loss can be Peripheral and Central (auditory pathway or cortex). It can be congenital or acquired. Congenital: present at birth, due to anomalies of inner ear or due to pre or perinatal factors. In present study we have discussed a case of a 12-year-old male child who came to OPD with complains of Sensory neural hearing loss since childhood. Audiometry report showed Right ear - moderate to profound mixed hearing loss Left ear - moderate to severe sensory neural hearing loss. First *Ayurveda* treatment of Sensory neural hearing loss with three sittings of *Marsha Nasya* from *Anu Taila*, 3 sittings of *Karnapurana* from *Bilwadi Taila* And *Sarivadi Vati* with the dose of 250mg thrice a day with luke warm water or milk for 1 month were given in a month and same procedure followed for 6 months. After that his hearing improved showing audiometric findings of Moderate hearing in both ear. After six months repeat Audiometry was done. Patient also felt better hearing in both ears. Decreased hearing due to Sensory neural hearing loss is result of Damage of hair cells, which can be managed with the help of Ayurveda treatment- *Marsha Nasya*, *Karnapurana* with *Rasayana* treatment. Hearing loss to school going children is a very serious problem affecting their education, skills and social relationship with others. With this study we can cure this type of deafness without any surgical intervention and help them to live their life in a better way.

Key words: *Badhirya, Karnapurana, Nasya, Rasayana*, Sensory neural hearing loss

Received: 31.01.2020

Revised: 25.02.2020

Accepted: 15.03.2020

Quick Response code



***CORRESPONDING AUTHOR:**

Dr. Chandani D. Chauhan

M.S. Scholar, Shalakya Tantra Department, IPGT & RA, GAU, Jamnagar, India

Email: chauhanchandani10495@gmail.com

Introduction:

Hearing ability is of utmost importance for the development of speech and language skills in a child. In the earlier times it was very difficult to detect hearing loss in children. However, with advanced medical science and technology hearing loss in children can be detected at an early stage. Hearing loss is a partial or complete inability to receive and interpret sound stimuli in one or both ears. Hearing loss is categorized into Conductive, Sensorineural and Mixed hearing loss on the basis of pathogenesis. Childhood hearing loss can be a debilitating condition that affects a significant degree of physical, mental and social health. Sensory neural hearing loss is most common hearing loss in children which accounts for 85 to 90% of childhood hearing loss in India.^[1] Increasingly more attention is being focused on mild or slight hearing impairment >20dB HL including unilateral or bilateral loss that may affect 10 to 15% of school-aged children with deleterious effects on school performance and social emotional development.^[2]

Congenital hearing loss is a hearing loss that is present at the birth. This loss can be because of genetic or non-genetic reasons. Some of the non-genetic causes can be: Alcohol or smoking in pregnancy, Diabetes in pregnancy, Infection in pregnancy (mumps, syphilis, tuberculosis meningitis, enteric fever, labyrinthitis, Herpes simplex, toxoplasmosis etc.), Brain or nervous disorder in the baby, premature birth, Low birth weight and Birth traumas or injuries. The possibility of non-genetic factors causing hearing loss in babies is only 25 %, however the possibility of babies born with hearing disability at birth due to genetic factors is up to 50

%.^[3] Some of the genetic causes can be following: Autosomal recessive hearing loss may occur when the child gets the recessive or abnormal gene from the parents. Autosomal recessive hearing loss constitutes 70 % of all genetic hearing loss cases. Autosomal dominant hearing loss may occur when the defective or abnormal gene from one of the parents with hearing disability may get passed on to the child. This kind of hearing loss occurs in 15 % of the genetic hearing loss cases. Though the above mentioned genetic and non-genetic causes may result in congenital hearing loss but the cause of some of the cases of hearing loss at birth may be difficult to establish.^[4]

Examinations:

Some of the tests that may be recommended for the babies and children to diagnose hearing loss i.e. Auditory brainstem response, Central auditory evoked potential, Otoacoustic emissions, Middle ear muscle reflex, Tympanometry, B.E.R.A (brainstem evoked response audiometry) and Audiometry.^[5] Among those here we used audiometry only for the objective diagnosis.

Ayurvedic management:

If any symptoms or signs of hearing loss in a child are established, it is suggested to seek immediate medical help to avoid any further complications and get timely medical treatment. If the child is facing deafness or total hearing loss, it will be a good idea to make the child learn sign language. You may enroll the child in special educational institutes or school that specializes in imparting education to children

with hearing disabilities. Children with Sensory neural hearing loss in both ears need to be identified and fit with hearing aids as soon as possible. It is important that the degree of hearing loss in each ear be diagnosed as accurately as possible.

Case history:

A 12 years old male child along with his parents came in OPD (outpatient department) of Shalakya Tantra department in our hospital on date 12/10/2018 with the complaints of decrease hearing in both ears from childhood, even he couldn't hear from one room to another and that's why his speech discrimination is very poor. No any past history and family history found related to sensory neural hearing loss. Under broad heading of ear examination some test was done, among them in otoscopy bilateral external auditory canal seen clear in

vision and each tympanic membrane was intact and mild retracted. Bilaterally air conduction was more than bone conduction in Rinne's test and in Weber's test the sound lateralized to right ear. Audiometry done before treatment (12/10/2018), which showed moderate to profound mixed hearing loss in right ear and moderate to severe sensory neural hearing loss in left ear. The patient having weight of 42 kg and 154 cm height. Pulse rate and blood pressure was within normal range, i.e. respectively 72/min and 118/82 mmHg. In detailed personal history we found that the patient was vegetarian having good appetite and sleep with normal micturition and bowel evacuation. The patient was given Ayurveda treatment with holistic approach i.e. *Shodhana* and *Shamana* treatment [Table 1] with *Pathya Apathya*. Treatment prescribed from was as following:

Table 1: Treatment Given

Treatment	Medicine	Mode of administration	Duration
<i>Nasya</i>	<i>Anutaila</i>	6-6 drops each nostrils for 7 days with 3 days interval	3 months
<i>Karnapurana</i>	<i>Bilwadi Taila</i>	Approx. 24-26 drops (1ml). For 15 days at home with 3 days interval.	6 months
Oral medicine	<i>Sarivadi Vati</i>	1 vati of 250mg thrice a day with luke warm water or milk after meal.	6 months Continuously

Pathya–Apathya^[6]

The patient was instructed to follow some regimen, i.e. *Avyayama, Ashirah Snana, Garbhagruha, Brahmacharya, Mrudu Shaiya, Akathana, Agni Santapa, Mansarasa Dugdha, Sneha Yukta Ahara, Lavana Yukta Bhojana, Sukhoshna Parisheka, Samvahana, etc.* and also advised to not follow some regimen, i.e. *Danta Kastha, Sirahsnaana, Vyayama, Kanduyana, Tushaara, Shoka, Shrama, Ruksha Kashaaya Bhojana, etc.*

Results:

Before starting of the treatment (12/10/2018) the audiometry report done, which showed moderate to profound mixed hearing loss in right ear and moderate to severe sensory neural hearing loss in left ear. After 06 month of treatment patient got excellent result in subjective criteria like hearing and speech also. Now he was able to hear from one room to another room. He can also able to pronounce words better from previous. Repeat Audiometry was done (12/4/2019), which showed moderate sensory neural hearing loss in both ear.

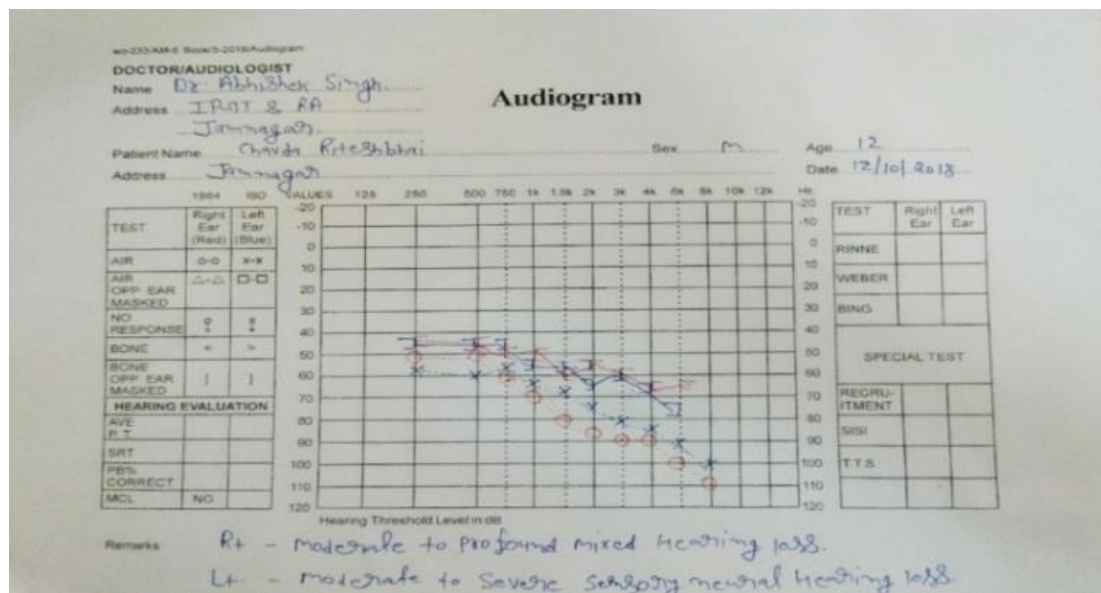


Fig-1: Audiometry Before treatment on 12/10/2018

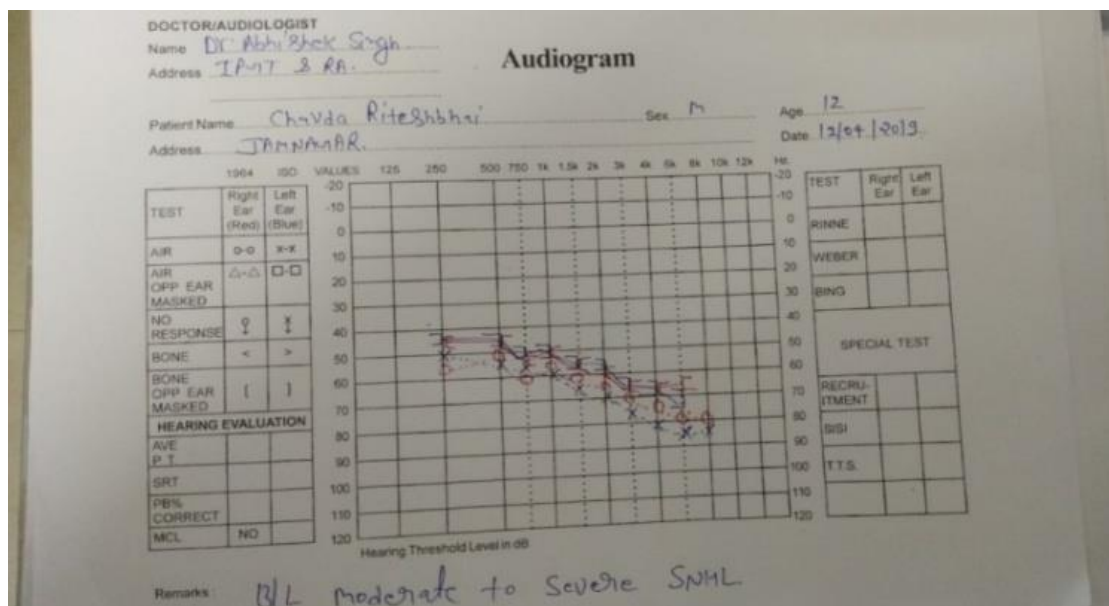


Fig-2: Audiometry After treatment on 12/04/2019

Discussion:

Badhira (SNHL) is one of the most common ENT disorder and it is one of the challenging problems of all ENT surgeon, the disease look simple but it doesn't bring satisfactory relief to the patients after repeated visiting the ENT clinic. Thus, the treatment adopted for *Badhira* in modern system of medicine has not been satisfactory. Surgical intervention (cochlea implant) is rare in these cases and performed only when presented with complications.^[7] The "Vata Vyadhi Chikitsa" Siddhanta can be implemented as a management of *Badhira*.^[8]

Besides these, *Ayurveda* also offers different kind of treatment modality in the management of *Badhira*. E.g. *Ghratapana*, *Rasayanasevana*, *Nasya*, *Snehana*, *Swedana*,

Snehavirechana, *Sirobasti*, *Karnapurana*, *Jalaukavacharana* etc. Among them, *Karnapurana* and *Nasya* is most prescribed procedure in the management of *Badhira*.

As mentioned earlier that the signs and symptoms of Hearing loss can be correlated with *Badhira* in *Ayurveda*. *Badhira* is due to vitiation of *Vata* and *Kapha Dosha*.^[9] *Anu Taila Nasya*^[10] scratches out the *Kapha Dosha* from *Shira* and improves the function of *indriyas* (*Karnaindriya*) thereby clearing the *Srotorodha*. *Anu Taila* was planned which pacifies the aggravated *Vata Dosha* in head and helps to normalize the function of central nervous system by nourishing the nervous system and balancing the circulation of blood in the sense organs including ear also. As *Shringata kamarma*

in *Shira* is the junction of all sense organs like eye, ear, nose and any medicine applied over this area targets the vitiated *doshas* related to all sense organs and helps in nourishment of nerves connecting to these areas. *Karnapurana* [11] is one of the basic treatments mentioned in Ayurvedic literature for all *Karnarogas*. *Karnapurana* with *Bilwadi Taila* has the *Vatashamaka* property. *Sarivadi Vati* [12] removes *Srotorodha* and does *Vatanulomana*. It is the best *Rasayana Dravya* for *Shravnendriya Vikara*. During six months of treatment period and follow up we have not encountered any adverse drug reaction related to oral treatment, *Nasya* and *Karnapurana* in the patient. Patient and his family were very happy that his hearing was improved and they were suggested for surgery from allopathic medicine before 3 years. Patient was prescribed routine and classical Ayurveda medicine and was not treated with any intentions of future publication we have not taken any accent of patient or prior informed consent from patient.

Conclusion:

Congenital hearing loss is a hearing loss that is present at the birth. Childhood hearing loss can be a debilitating condition that affects a significant degree of physical, mental and social health. *Anu Taila Nasya*, *Bilwadi Taila Karnapurana* and *Sarivadi Vati* orally gives excellent result in congenital sensory neural hearing loss thus Ayurveda has a variety of medicines and procedures to treat *Badhirya* (sensory neural hearing loss). This case study indicates effectiveness of *Ayurveda* in management of *Badhirya*.

References:

1. <http://www.indianjotol.org/article.asp?issn=0971-7749>. Last Accessed on 15/12/2019.
2. Deboshree Bhattacharjee <https://parenting.firstcry.com/articles/hearing-loss-in-children> Last Accessed on 12/03/2020.
3. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5675031/> Last Accessed on 13/03/2020.
4. Deboshree Bhattacharjee <https://parenting.firstcry.com/articles/hearing-loss-in-children>, Last Accessed on 12/03/2020.
5. Deboshree Bhattacharjee <https://parenting.firstcry.com/articles/hearing-loss-in-children>, Last Accessed on 12/03/2020.
6. Shashtri BS editor of *Yogaratanakara Uttarardh*, *Karnaroga chikitsa, pathyapathya* 1-3 Chokhamba Surbharati prakashan, Varanasi, 2015; P-319.
7. Deboshree Bhattacharjee <https://parenting.firstcry.com/articles/hearing-loss-in-children>. Last Accessed on 12/03/2020.
8. Shastri K. Editor of *Sushruta Samhita uttaratantra*, *karnagatarogavignaniyadhayam* 21/35, Reprinted, Chaukhamba Sanskrit Sansthan, Varanasi, 2011, p-130
9. Shastri K. Editor of *Sushruta Samhita uttaratantra*, 20/08, *Karnagatarogavignaniyam*, Reprinted, Chaukhamba Sanskrit Prakashana, Varanasi, reprint 2014, p- 957.
10. Acharya YT and Acharya NR editor of *Charak samhita*, *Sutrasthana* 5/63-65, Reprinted, Chokhamba Surbharati prakashan Varanasi 2000; P-41.

11. Shastri K. Editor of Sushruta Samhita uttaratantra, karnagatarogavignaniyadh-yayam 21/38, Reprinted, Chaukhambha Sanskrit Sansthan, Varanasi, 2011; p-130.
12. Chunekar KC, Editor of Bhavprakash Nighantu, guduchyadi varga, 2/49, 6th edition, Chaukhambha Vidyabharti academy, 2013; p- 451.

Conflict of interest: Author declares that there is no conflict of interest.

Source of support: None

How to cite this article:

Chauhan CD, Vaghela DB, rare case report: management of badhira – congenital sensory neural hearing loss with ayurveda. Int. J. AYUSH CaRe. 2020; 4(1):38-44.