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Case Report

Relapsing Sudden Hearing Loss Treated and Prevented with Principles of Persian Medicine: A Case Report

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Abstract

WHO has declared sudden hearing loss (SHL) as the third cause of disability. The mechanism of SHL remains unknown. Considering numerous complications of related medication, we decided to use non-medical therapeutic modalities derived from *Persian Medicine* (PM). A middle-aged female patient had a history of multiple attacks of SHL, she disliked to get injection again and preferred a traditional treatment. Therefore, she was advised to take a simple protocol in order to make rheological changes in and evacuation of the probable stagnant phlegmatic matter as it was diagnosed from the given oral history. The hearing loss recovered 60% after the first attempt and up to 100% after the second round and has not yet relapsed in the recent two and a half years of follow up despite its recurrences in the year before the trial. In this patient, by using safe user-friendly methods without any medications, we tried to increase the blood circulation to the affected organ, in order to change the consistency of the stagnated waste material so that it could be disposed from the auditory nerves and also out from the body.

Keywords: Sudden hearing loss; Persian medicine; Nozj; Audiogram; Deafness

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Introduction

Sudden hearing loss (SHL) is defined as a sudden loss of at least 30 dB in hearing, occurring in three consecutive frequencies over three days or less, usually one-sided [1]. Annually, about 4,000 new cases are reported in the United States [2]. Half a billion people, almost 7% of the global population, had disabling hearing loss in 2015 [3]. Recently, hearing loss has received unprecedented attention. The formation of a Commission in Lancet to identify ways to reduce the global burden of the disease also emphasizes the issue [4]. The problem occurs at any age, but is more common in older patients [5]. About 10 to 15

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percent of cases have specific etiology, but the rest are idiopathic. The most important idiopathic causes include viral infections, vascular obstruction, trauma, electrolyte imbalance, cancers, autoimmune diseases, drug agents, loud sound, and stroke [1]. Patients usually report heaviness and fullness in the ear that can be accompanied by tinnitus or vertigo [2], but most patients do not mention a history of hearing problems [6]. Self-improvement in placebo-treated subjects was in the range of 35-39% in most controlled studies [2]. Although the mechanism of the disease is unknown, yet one of the probabilities is the cochlear blood perfusion insufficiency, therefore vasodilators and rheology modifying factors are recently being prescribed in Europe. [7]. According to American Academy of Otolaryngology (AAO), the use of oral corticosteroid is the first line of treatment that may be substituted by intra-tympanic corticosteroids if failed [1]. Since loss of hearing can affect the quality of life of patients and impose high social and economic costs, WHO has declared the disease as the third leading cause of disability in the reproductive age period [2]. On the other hand, many side effects due to corticosteroids consumption have been reported including diabetes, hypertension, hyperlipidemia, osteoporosis, peptic ulcer, fatty liver, congestive heart failure, depression, hormonal disorders, teratogenicity and increased intraocular pressure [1]. Due to the lack of definitive treatment for the disease and the numerous complications of the drugs used for its control, it may be beneficent to use integrative medicine. In the worldwide upcoming approach to integration of traditional/complementary treatments with conventional medicine, highly rich and rooted yet undiscovered *Persian Medicine* (PM) alternatives may be explored more in the near future. Regarding the intention of a female patient with SHL to use PM treatments and her refusal for conventional medication and intervention, we approached to analyze the case and treat her with the principles of PM.

Patient and Methods

Patient characteristics and medical history

A 36-year-old woman with unilateral deafness and a sensation of fullness and heaviness in the left ear consulted our PM colleagues. Her recent hearing loss followed a cold and started with a feeling of heaviness and fullness in the same ear from the previous day which gradually resulted in complete deafness.

Conventional Medical History: The patient was a married, female patient with a BMI of 29 who suffered from allergies for many years, for which she used chicory extract occasionally. Tinnitus, dizziness, imbalance, nausea or vomiting, fever, dysfunction, headache, visual impairment, or other accompanying symptoms were absent. There was also no history of recent febrile illness, drug use and previous trauma to the ear or the head. In initial examinations, patient was completely alert and not ill. Vital signs were within normal range. She had several episodes of similar hearing loss almost every three months, in the past year, which were treated by intra-tympanic corticosteroids although the problem usually

lasted about 72 hours even after injections. The otoscopic examination of both ears was normal. Audiogram showed one-sided hearing loss (Fig. 1).

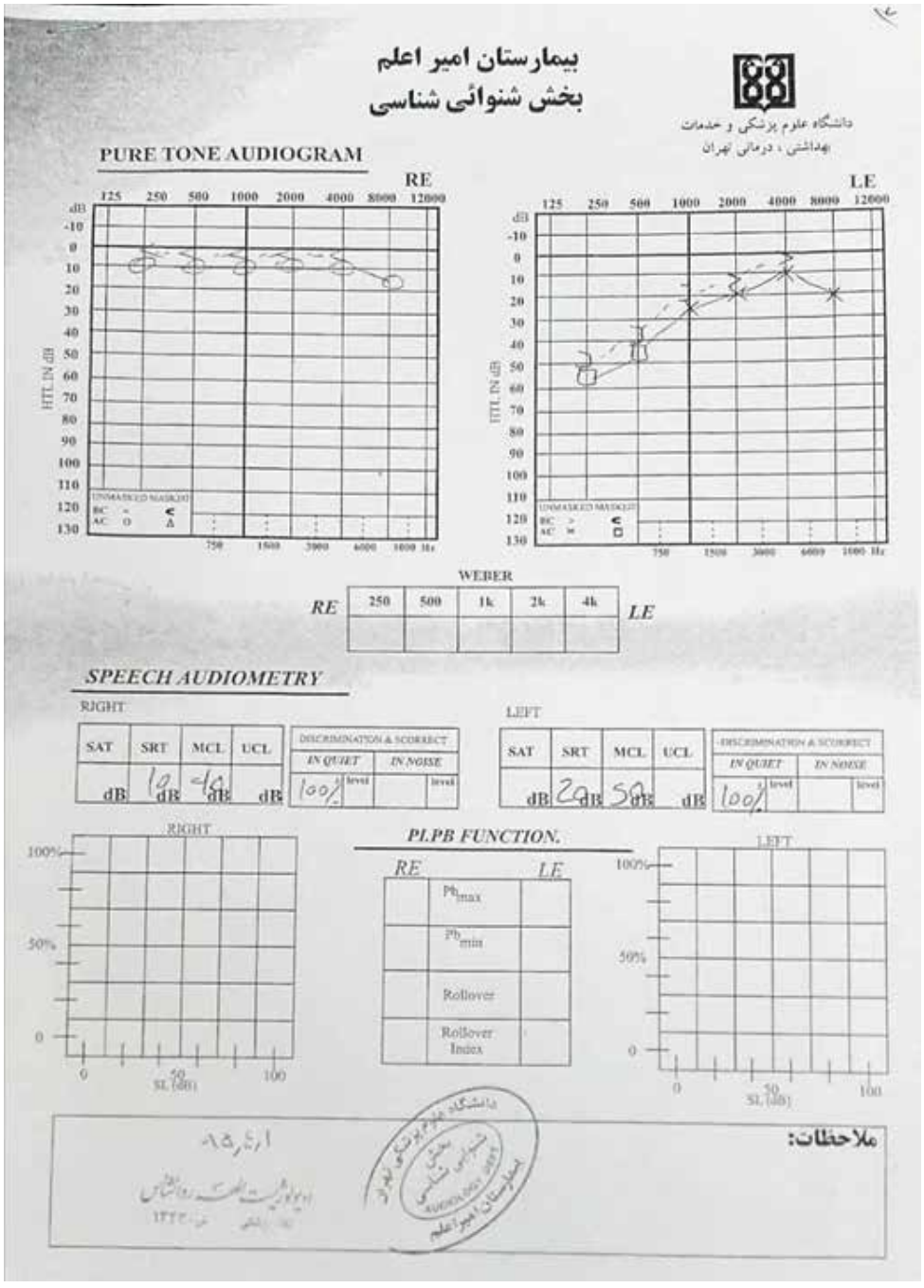

Figure 1. First day's audiometry report prior to treatment showing left sided sensorineural hearing loss

Persian medicine medical history

A female patient living in Tehran-Iran, obese with wet, white skin and curly hair, had rashes for years following hot food administration. Felt more comfort in winter because of the coolness of air. She had snores and shortness of breath in spring. With no complains in her digestion system. Had appropriate sleep quality and 2-3 times of normal defecations per day. She occasionally had aerobic exercise. Although generally some signs of excessive inner heat and warm distemperament was detected, but it was proposed to be a stagnated heat under a thick layer of cold phlegmatic deposition or "*Bad-Anbaasht*" [8,9].

Treatment course

Despite the previous conventional treatments, this time, only Persian Medicine treatment was done due to the patient's unwillingness to inject corticosteroids. Thus, the following therapeutic measures were prescribed only for one day which included two rounds of a three-part protocol:

Part 1: Administration of a hot bag on the affected ear for about 15 minutes

Part 2: 10 episodes of 2-minute joggings

Part 3: Placing feet up to ankles in comfortable warm water while sitting on a chair for about 15 minutes

Results

The patient had a 60% improvement in symptoms after accomplishing only one round of the protocol, and after fulfilling the recommended second round, she felt 100% improvement in her symptoms. In the re-examination of the clinical examination and the auditory on the following day, the hearing of the left ear was confirmed to be in the normal range (Fig. 2). Her episodes of SHL did not reoccur in the previous two and a half years of follow up despite its recurrences in the year before the trial.

Discussion

To discuss the philosophy and reason of such a treatment protocol design, it should be mentioned that in Persian medicine, sensory-neural hearing loss is categorized into acute "*Tarsh*" and chronic "*Vaghr*" types. The congenital types are considered incurable but the acquired secondary types are believed to be curable if treated in its early stages. In this case, considering the cold-tempered onset and the cold distemperament of the patient's outlying tissues in examination and recurrence of the problem in her medical history, an accumulation of cold-tempered waste substance in the acoustic nerve was presumed. In such a case, first, the obstructing hard-consistent material should be loosened by a process named "*Nozj*" which is a rheological change in stucked waste matter to make it disposable or recyclable. This was done by the local application of hot bag on the affected ear. The second step is to guide and move the badly located material - now prepared to move - to exit the original organ by different measures. In this patient, a series of jogging was prescribed which not only helps the expulsion by its vibrations but also enhances the blood circulation to the location by increase in inotrophy and chronothropy of the heart and also diluting the blood due to the subsequent increased shear force effect on the blood. In PM

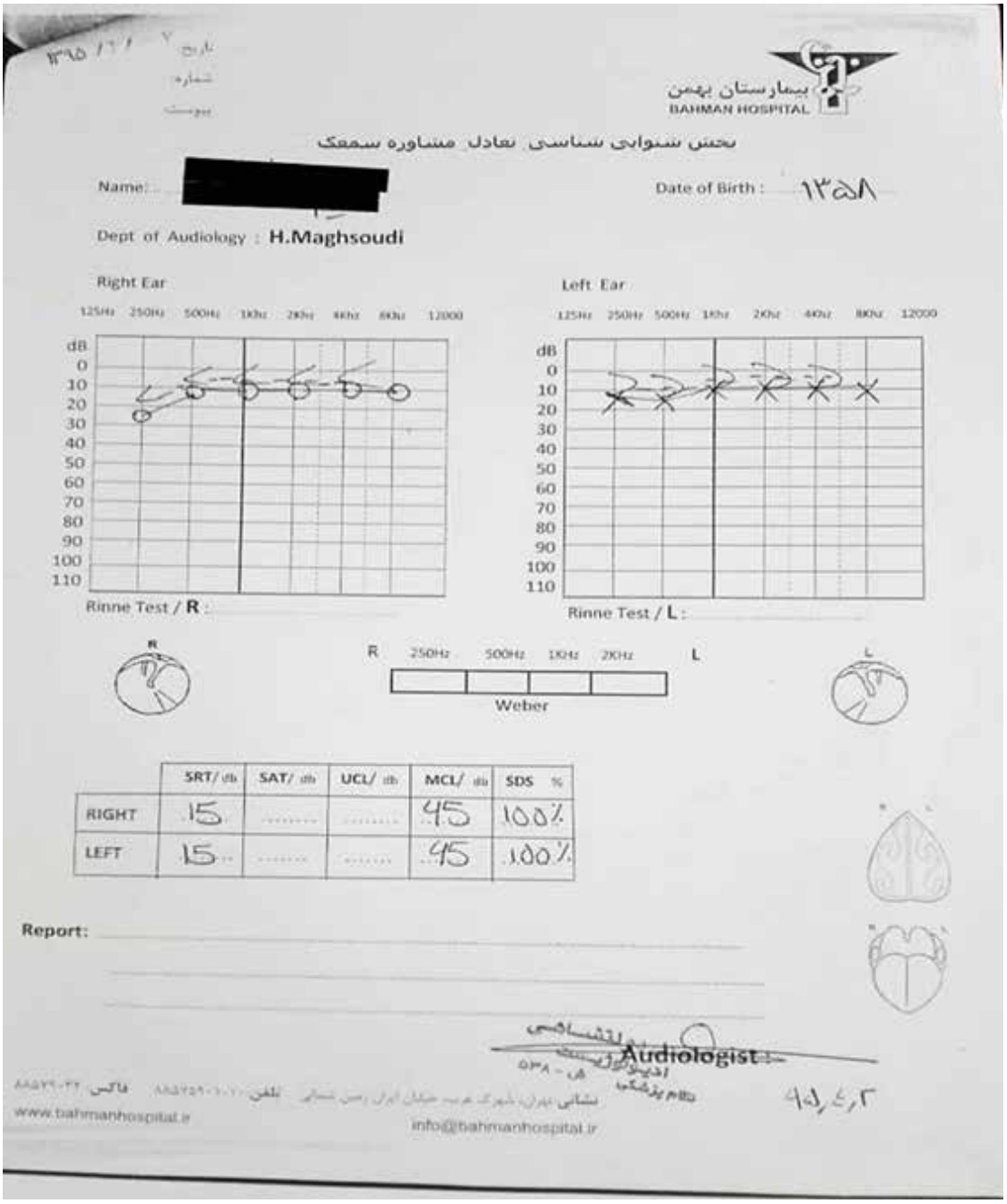

Figure 2: Second day's audiometry report (after 1 day of treatment) showing normalization of hearing

besides that, blood is known to be the carrier of the innate heat which is known to accomplish most of the body functions including the "*Nozj*" and the moving process. The third strategy is to open a way out of the body, or at least to distract the matter to an opposite side of the body. This was also accomplished by the foot bath which helped to transfer and remove material from the head downward as well having enhancement effect on the systemic peripheral blood flow by reducing peripheral vascular resistance and also its succeeding compensating effect to increase cardiac output which all also promoted cochlear perfusion.

It is notable that one of the hypotheses assumed in conventional medicine, about the unknown mechanisms of this disorder is the cochlear blood perfusion insufficiency, therefore vasodilators and blood rheology modifying factors are recently being prescribed in Europe. This assumption and treatment comes very close to our traditionally deduced philosophy and approach where we also expected to increase the flow of blood to the ear area with local heat and exercise in order to facilitate the process of *Nozj* to clean up the affected organ [1]. At the end it is noteworthy that by designing such a user-friend and simple harmless treatment, based on the principles of Traditional *Persian Medicine* we were able to treat an acute SHL patient and to control its relapse for more than two and a half years; thus we hope and seek to find more alternative solutions from the context of *Persian Medicine* to help mainstream medicine in managing medical difficulties.

Conflict of Interest

Authors declare no conflict of interest.

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None.

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