Executive Summary

▢ Background

According to KCD-8, in classification of H81, Meniere's disease (H810), benign paroxysmal vertigo (H811) and vestibular neuritis (H812)are included. Besides other peripheral vertigo (H814) can be subdivided with aural vertigo (H81.30), otogenic vertigo, other peripheral vertigo and Lermoyez's syndrome. And other than that vertigo of central origin, disorders of vestibular function are regulated and these disease are included commonly as vertigo (R42) in Health Insurance Review and Assessment Service (HIRA).

As reports about frequency of disease by HIRA from 2009 to 2013, the ratings of R42 and H81 have been increased. Especially for R42, the rating has risen from 98 in 2009 to 89 in 2013, and medical service fee increased 23.5%, and as well with H81, the rating increased from 96 in 2009 to 73 in 2013, and its medical service fee increased by 49.9%. The number of patients significantly increased which also can be caused by changed in healthcare environment. Since many medical institutions are placed in cities and downtowns, excessive competitions affected the healthcare services. Main cause of increased medical service fees seems to be superfluously prescribing of medications.

Since 1999 when The Korean Balance Society established its organization, the importance of vestibular rehabilitation exercise has been stressed to residents and general practitioners each year. In meetings such as Korean Society of Otorhinolaryngology-Head and Neck Surgery, Korean Otological Society, vestibular workshop and two clinical dizziness seminars, the effectiveness of vestibular rehabilitation exercise has been emphasized. However, the medical service fees are not arranged with HIRA. As for the results, medical treatment practice cannot be statistically calculated compared with the ratio of patients and medical service fee.

With primary medical care centers and medical practitioners, the rehabilitation exercise can hardly be the first treatment plan with disease that can be observed with simple assessments and when expensive diagnostic equipments

are needless, and to perform the rehabilitation exercise, a staff has to spare some time to explain the exercise. With cases like primary medical centers, they prefer to prescribe the medication to preserve the medical fees and to relieve the symptoms at the early stage and schedule patients with follow up.

Since there is no standard guideline for the vestibular neuritis treatment, empirical treatment methods are emphasized among the clinicians. Therefore, by applying the standard treatment protocols to R42, and H81, a new policy regards are needed to reduce unnecessary medical charges and to provide accurate treatments to patients.

▢ Objective

This study was performed to research domestic vestibular neuritis treatment status and to evaluate the effectiveness between vestibular suppressant and vestibular rehabilitation groups through the literature review; at the same time, to verify treatment guidelines provided from domestic healthcare providers or professional medical staffs. Proposing a standard treatment method for vestibular neuritis is the purpose of this study by reviewing billing data from the HIRA about typical dizziness disease, vestibular neuritis and vertigo.

▢ Methods

The status of trends and usage of medication, testing and processing were statistically evaluated by using illness code H81 and R42 from the HIRA.

To establish treatment guidelines regarding dizziness reflecting domestic status, systemic literature review was performed and decided the title as “The Comparative Study of Effectiveness in Vestibuloneuritis Using Vestibular Exercise Therapy".

At the same time, a survey was conducted targeting domestic otology doctors about treatment status, and based on the result, a prospective randomized multi-center clinical research was performed to compare medication groups and vestibular exercise groups. The dizziness handicap inventory (DHI) scores and other tests results such as posturography, bithermal caloric test, and rotation chair test of Pre-treatment and post-treatment were measured.

▢ Results

- Prescription of medications were 43.8 times overly administered than recommended days by professional healthcare providers.
- Unnecessary tracking observations had been done twice longer than standard tracking observation period (3months), resulting in the increase in the medical service fees to the patients.
- In the systematic literature review, we found that vestibular rehabilitation exercise is effective on treating the vestibular neuritis.
- The prospective clinical research results showed no difference between control group (dimenhydrinate, 50mg, 3 times/day, for 3 days) and treatment group (vestibular rehabilitation, 5 times/day, for 4 weeks).

Vestibular neuritis was formerly known to occur mostly among the age groups of 30-50's and to appear in certain season as in virus form. But according to data from the HIRA in 2013, in Korea, vestibular neuritis is most likely to appear in 50's (23.5%), 60s (20.5%) and 70's (20.2%) which shows higher chance to get vestibular neuritis in advanced age. The incidence rate between two gender groups shows that women have higher chances to get the disease with 65.3%. The results are quite different when comparing with foreign countries.

In order to treat the vestibular neuritis, the usage of benzodiazepine class has increased as average 40.1days in 2009 to 42.9 days in 2013. This phenomenon is unnecessary when the symptoms are easily detectable and has significant characteristic of "self-remission". Based on 2013 study cases, the average usages days were 194.6days for betahistine; 96.6days for antiemetics; 152.2 days for Ginkgo extract; 131.4 days for antihistamine; and 37.9 days for steroids. These medications were 43.8 times overly prescribed than recommended days by professional healthcare providers. And twice longer period of tracking observations had been done than the standard tracking observation period, which causes the increase in the medical service fees

charging to the patients. Besides, vestibular suppressant were being misused regardless ages and regions, and the status intend to increase each and every year.

Through the systemic literature review, we observed that vestibular neuritis was treated effectively when the rehabilitation exercise was performed. Groups that performed the exercise showed improved test results through SP value which objectively evaluate patient's postures and balance ability and though subjective symptoms by scoring DHI-physical, disability scale and visual analog scale. Also both exercise group and corticosteroid treated group showed equivalent results in alleviating symptoms which mean that the rehabilitation exercise can be recommended to treat the vestibular neuritis.

▢ Conclusions

Based on the literature review and previous study, the randomized clinical study was conducted with two different controlled groups, one group was to take the antihistamine for three days and the other group was to perform vestibular rehabilitation exercise ,and both treatments were administered by professional health care providers. DHI scores and other test results such as posturography, bithermal caloric test, and rotation chair test were compared between two groups, and no significant test results were showed.

As for the effective results, in patients with vestibular neuritis, administering vestibular suppressant for short amount of time and after acute stage has passed, teaching them vestibular rehabilitation exercise is effective to treat the disease.

▢ Plain Language

Some reversible disease like vestibular neuritis, caused from functioning changes in vestibular organ, can compensate and restore its features. But overdosing or long-term usage of vestibular suppressant can prolong the symptoms. The purpose of administering the medication is only to reduce the symptoms in early stage of onsets and the main treatment should be the rehabilitation exercise.

Vestibular rehabilitation exercise is an effective treatment method and it can be easily performed at anytime and anywhere regardless all ages and sex. Therefore, the exercise should be advertised nation-widely and taught by the medical instructors. Especially, education for all healthcare providers and medical staff should be carried out in general.

In order to promote and activate the rehabilitation exercise, the new policy should be established regarding charging medical service fees followed by teaching.

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Key words

Vestibular rehabilitation, Vestibular neuritis, Vestibular compensation, vestibular suppresant, Standard treatment guideline