

# DOV Questionnaire Manual for Therapists

## Abstract

DOV questionnaire has been designed based on differential diagnosis of dizziness from vertigo and differential diagnosis of peripheral from central vertigos. In many cases, diagnosis is made by taking accurate history from the patient.

This Study includes two sections as below:

1. DOV Questionnaire ([Appendix](#))
2. DOV Questionnaire Manual for Therapists

## Opinion

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**Abbreviations:** PLF: Peri Lymphatic Fistula; SSCD: Superior Semicircular Canal Dehiscence; TMJ: Temporo Mandibular Joint; MDD: Mal De Debarquement; BPPV: Benign Paroxysmal Positional Vertigo

## Introduction

Design of DOV questionnaire occurred to me when a patient with the following presentations referred to our center, complaining of dizziness. The patient was a 24 years old woman who suffered from dizziness due to cardiac condition, and referred to ENT and audiology clinic by mistake. The patient's sister deceased of cardiac arrest in previous year. Fortunately, by taking history and referring the patient to a cardiologist, finally the patient underwent open heart surgery and serious risk was eliminated.

The process of diagnosis and treatment of the diseases causing dizziness is different from those causing vertigo, which demands differentiation of dizziness from vertigo.

DOV questionnaire has been designed based on differential diagnosis of dizziness from vertigo and differential diagnosis of peripheral from central vertigos. In many cases, diagnosis is made by taking accurate history from the patient. In the children, from whom a history cannot be taken, cardiology, ENT and neurology referral is required.

## Discussion

The patients describe dizziness as being woozy or giddy. The diseases that often cause dizziness include hypotension, hypertension, hyperlipidemia, anemia, cardiovascular conditions, hypoxia and pulmonary problems, parathyroid gland dysfunctions.

However, some diseases cause both dizziness and vertigo, such as anxiety disorders or thyroid gland dysfunctions, especially hypothyroidism. Those suffering from hypothyroidism are more exposed to vertigo. I had a patient suffered from vertigo after injection of iodine. In contrast, vertigo occurs in ear diseases, migraine, some brain tumors and some strokes and in some MS patients. As mentioned earlier, it is not possible to differentiate dizziness from vertigo in many occasions; for example, in combined disorders where the patient suffers from disorder in cardiac vessels and experiences cerebellar infarction. Both conditions, therefore, should be considered in such patients.

In some migraine patients, vertigo is more prominent than headache, so they do not speak of their headache, and their migraine is not diagnosed for this reason. Symptoms of migraine such as unilateral pulsed headaches, photopsia, photophobia, phonophobia, olfactophobia, teichopsia, scotoma, tactile hallucination, and headache lasting between 4 to 72 hours are included in this questionnaire. In Peri Lymphatic Fistula (PLF), the patients suffer from vertigo after sneeze, severe cough, excessive effort and lifting heavy loads. PLF occurs in traumas, but it may occur spontaneously, which are all included in this questionnaire. Numbness around lips and fingers, dyspnea and chest pain are symptoms that are not often related to ear diseases, which are included in the questionnaire.

In those patients experienced vertigo after a cold, we should be suspect of vestibular neuritis. The patients discharged from hospital, administration of amino glycosides or vestibular neuritis may be considered. Both are included in this questionnaire. Peripheral vertigos, vestibular neuritis, Meniere's disease, and BPPV are all included in this questionnaire, which are differentiated based on severity of vertigo, duration of vertigo and the accompanying symptoms [1,2]. In vestibular neuritis, the patient suffers from severe vertigo for one or two days, and then severity and duration of vertigo decreases gradually (tardiness). In some patients with vestibular neuritis, symptoms similar to BPPV appears after decrease of severity and duration of vertigo (after acute phase), which is a question of this questionnaire [3].

But in BPPV, vertigo is mild from the very first and lasts shorter than 30 s by changing position of the head toward a special direction. BPPV and central pathologies like medulloblastoma and cerebellar glioma both cause positional vertigos, which are differentiated based on presence of tardiness in BPPV.

In peripheral vertigos, severity and duration of vertigo will be decreased after a while and the patient generally experiences more rotation as compared to central vertigos. In Meniere's disease, severe rotational, periodical and attack vertigos of 20 minutes to 2 to 3 hours in duration, tinnitus, nausea and vomiting, ear fullness [4], sweating and diarrhea have been seen in some patients. Furthermore, drop attack (Tumarkin attack) is seen in some patients with Meniere's disease, which are all included in questions of the questionnaire [5-8].

In Superior Semicircular Canal Dehiscence (SSCD), the patient

experiences vertigo following loud sound (Tullio phenomenon), which is a question in this questionnaire. If the patient also has hearing loss and wears hearing aid, he/she experiences vertigo after wearing hearing aid. Heavy headedness is often caused by ear vertigos, but lightheadedness by non-vestibular vertigos, which is included in questions of the questionnaire.

Migraine is associated with motion sickness. Many patients with motion sickness also suffer from migraine, which is a question in this questionnaire. Vertigo resulting from cervical disorders, dislocation of cervical vertebrae, arthritis, and stenosis is very common, which is a question in this questionnaire. The patients with vertebra basilar ischemia experience such symptoms as weakness, drowsiness, hearing loss, diplopia, unsteadiness and visual hallucination, which are among the questions of this questionnaire. They should be referred to a cardiologist and neurologist.

As included in this questionnaire, dizziness and giddiness following exercise of upper extremity may be due to Subclavian Steal Syndrome, which should be referred to a cardiologist. Inflammation of Temporo Mandibular Joint (TMJ), toothache and dental problems may cause vertigo as they cause otalgia. During my clinical practice, I had two patients suffered from vertigo [9] due to dental problems. The first patient suffered from vertigo while dental surgery following injection of drug into gum; dental surgery was postponed for two months due to vertigo, so that the surgery can be performed after treatment of vertigo. In the second patient, part of surgical instrument was left in the patient's gum; fortunately the patient stated that she experienced vertigo after going to the dentist. By referring the patient to the treating dentist and dental radiography, it was extracted from the gum and the patient's vertigo was treated. TMJ inflammation is included in the questionnaire.

Sudden deafness that is caused in both peripheral and central disorders is among the questions of this questionnaire.

Central vertigos have special symptoms, which are reflected in the questionnaire. Hearing loss is seen in some central pathology. Unconsciousness following vertigo, projectile vomiting, visual, auditory and olfactory hallucinations, severe headache, stiff neck, dysphasia, dysbasia, dysstasia, diplopia, weakness of muscles, drowsiness, dysmetria, facial pain, facial numbness, dysphagia, scotoma, uncontrollable hiccup, a sensation of electricity in fingers and numbness in thighs experienced by some MS patients.

Vertigo is very common in anxiety disorders, which is included

in this questionnaire. One of the questions of the questionnaire is that the patient is asked for what reason you experienced vertigo. This question was very helpful for me. For example, in the patient experienced vertigo after going to the dentist, we suspected of dental disorder by asking this question and reason of the patient's vertigo was revealed [10]. Mal De Debarquement (MDD), in which the patient suffers from vertigo after travel by ship, is one of the questions of this questionnaire.

## Conclusion

At the beginning of the questionnaire, two terms of dizziness and vertigo is described to the patient. It will of a great help to take accurate history. My experience for taking a history by this method was successful. I hope this questionnaire may be useful for the therapists and the patients for diagnosis and treatment.

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