

## Short Communication

# We must Attention to Serum Vitamin D Deficiency in Patients Who Needs Rehabilitation

Lotfi-Yones\*

Department of Audiology, University of Social Welfare and Rehabilitation Sciences, Tehran, Iran

\*Corresponding author: Lotfi-Yones, Department of Audiology, University of Social Welfare and Rehabilitation Sciences, Tehran, Iran

Received: August 15, 2016; Accepted: August 23, 2016;

Published: August 25, 2016

## Short Communication

Today's with improvement of health conditions in developed countries the number of old peoples are increasing. One of the most important health problem of them is vertigo and falling.

Among the causes of vertigo and falling, benign paroxysmal positional vertigo (BPPV) and muscles weakness are important factors and perhaps the most important of them.

Unfortunately the main approach in these conditions is physiotherapy and vertigo rehabilitation exercises. Recurrence of vertigo and falling after primary rehabilitation exercises are frequent, because we have not attention to the all causes of vertigo and falling and condition that induces these symptoms.

One of the causes of idiopathic BPPV and falling is vitamin D deficiency; most cases of BPPV are idiopathic with recurrent attacks in about 15% of patients. Today's vitamin D deficiency is an international health concern, that causes many disease as osteoporosis, autoimmune disease, cancer, ....., muscle weakness and vertigo [1].

Vitamin D has antiproliferative effect and in those who has nasal polyposis, vitamin deficiency is one of important factors [2].

Investigators have found that vitamin D can cause immunomodulation and modulation of other hormonal systems [3].

Pellicane in a research found that in 67% of patients that needs rehabilitation, the serum vitamin was insufficient or deficient [4]. This result denotes the prevalence of vitamin deficiency in patients.

BPPV is the most common neuro-ontological disorder that causes vertigo [5]. This disorder accepted that is caused by dislodged otoconia [6]. One of the causes of dislodgement of otoconia is osteoporosis [7], and the effect of vitamin D on osteoporosis has been established [8].

Researchers found that vitamin supplementation reduces risk of falling in elder peoples and bone fractures [9] and recurrence and intensity of vertigo [10-11]. Many studies have shown a correlation between vitamin D deficiency and recurrence of BPPV [12-13], other study show vitamin D deficiency associated with increase of BPPV [14].

Vitamin D deficiency has many signs and symptoms and among them, vertigo and muscle weakness and neurological disorder and heart disease are very important for rehabilitation program, so attention to measuring serum vitamin in patients who needs rehabilitation is very important and supplementation of vitamin will help the outcome of rehabilitation programs and wellbeing of patients.

## Reference

1. Biancuzzo RM, Young A, Bibuld D, Cai MH, Winter MR, Klein EK, et al. Fortification of orange juice with vitamin D(2) or vitamin D(3) is as effective as an oral supplement in maintaining vitamin D status in adults. *Am J Clin Nutr*. 2010; 91: 1621-1626.
2. Rostkowska-Nadolska B, Fraczek M, Gawron W and Latocha M. Influence of vitamin D(3) analogues in combination with budesonid R on proliferation of nasal polyp fibroblasts. *Acta Biochim Pol*. 2009; 56: 235-242.
3. Dusso A, Brown A, Slatopolsky E. Vitamin D. *Am J Physiol Renal Physiol*. 2005; 289: F8-F28.
4. Pellicane AJ, Wysocki NM, Schnitzer TJ. Prevalence of 25-hydroxy vitamin D deficiency in the outpatient rehabilitation population. *Am J Phys Med Rehabil*. 2010; 89: 899-904.
5. Von Brevern M, Radtke A, Lezius F, et al. Epidemiology of benign paroxysmal positional vertigo: a population based study. *J Neurol Neurosurg Psychiatry*. 2007; 78: 710-715.
6. Parnes LS, Agrawal SK, Atlas J. Diagnosis and management of benign paroxysmal positional vertigo (BPPV). *CMAJ*. 2003; 169: 681-693.
7. Vibert D, Kompis M, Hausler R. Benign paroxysmal positional vertigo in older women may be related to osteoporosis and osteopenia. *Ann Otol Rhinol Laryngol*. 2003; 112: 885-889.
8. Lips P, van Schoor NM. The effect of vitamin D on bone and osteoporosis. *Best Pract Res Clin Endocrinol Metab*. 2011; 25: 585-591.
9. Dhesi JK, Jackson SH, Bearne LM, et al. Vitamin D supplementation improves neuromuscular function in older people who fall. *Age Ageing*. 2004; 33: 589-595.
10. Sheikhzadeh M, Lotfi Y, Mousavi A, et al. Influence of supplemental vitamin D on intensity of benign paroxysmal positional vertigo. A longitudinal clinical study. *Caspian J Intern Med*. 2016; 7: 93-98.
11. Sheikhzadeh M, Lotfi Y, Mousavi A, et al. The effect of serum vitamin D normalization in preventing recurrences of benign paroxysmal positional vertigo: A case-control study. *Caspian J Intern Med*. 2016; 7: 173-177.
12. Büki B, Ecker M, Jünger H, Lundberg YW. Vitamin D deficiency and benign paroxysmal positioning vertigo. *Med Hypotheses*. 2013; 80: 201-204.
13. Jeong SH, Kim JS, Shin JW, et al. Decreased serum vitamin D in idiopathic benign paroxysmal positional vertigo. *J Neurol*. 2013; 260: 832-838.
14. Talaat HS, Abuhadied G, Talaat AS, Abdelaal MS. Low bone mineral density and vitamin D deficiency in patients with benign positional paroxysmal vertigo. *Eur Arch Otorhinolaryngol*. 2015; 272: 2249-2253.