

# Benign Paroxysmal Positional Vertigo in pregnancy

- clinical case -

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## Abstract

*The authors present two case reports of recurrent positional vertigo during pregnancy, without any recognized specific cause (traumatic or viral), which were rapidly diagnosed as benign paroxysmal positional vertigo just by specific clinical examination. Acknowledgement of*

*this disease allows early diagnostic and appropriate treatment. Even though is a benign pathology, it has a strong impact on patient's quality of life, which imposes an early correct medical care.*

**Keywords:** otoconia, semicircular canal, positional vertigo

## Background

Benign Paroxysmal Positional Vertigo (BPPV) is a distinctive vestibular pathology, characterized by sudden onset of vertigo episode while sustaining a certain head position, gravity related.

Of all inner ear affections that cause dizziness, BPPV is the most common one (20% patients with vertigo). BPPV is twice more frequent in women, easy to diagnose and treatable by simple physical means.

It appears due to otoconial fragments - canalolithiasis (Figure 1) in the inner ear's endolymph.

## Clinical cases

Though there hasn't been a cause - effect correlation established

between BPPV and pregnancy, there has been acknowledged BPPV in pregnant women, without any specific factor like head trauma or recent viral infections.

We will present two clinical cases in which we diagnosed BPPV during pregnancy.

The first one is a 28 year-old female that presented recurrent, intense vertigo episodes, doubled by vegetative phenomena (nausea, vomiting) in the ninth week of pregnancy, with urgent admission in a neurological department. Once a neurological cause for the symptomatology ruled out, the patient was directed to our Institute.

At admission, the patient showed vertigo with horizontal and rotati-

onal geotropic nystagmus in right Dix & Hallpike position (supine right-ear-down with head in hyperextension and rotated by 45 degrees towards the investigated ear), with 5 seconds latency and which lasted for about 20 seconds. The rest of the audio-vestibular examination was within normal ranges, without other functional deficits. There are to be mentioned the already known spasmophilia of the patient, the lack of nutrition in the first six weeks of pregnancy due to disgravidity, as well as the dehydration provoked by vomiting due to the recent vertigo.

We had the diagnosis of Benign Paroxysmal Positional Vertigo, right posterior semicircular canal. The treatment consisted in the charac-

teristic otoconial repositioning manoeuvre - the Epley maneuver. After seven days, the examination showed lack of vertigo and nystagmus in Dix & Hallpike position. Five weeks after delivery the patient came back for examination, showing no symptom, nor clinical sign of vestibular damage. Moreover, the blood calcium levels remained within normal ranges.

The second case presents a 27 years-old female who presented to the clinic in the 31<sup>st</sup> week of pregnancy with intense vertigo, caused by turning over in the bed, in any direction, for about seven days. The vestibular examination revealed the presence of positional nystagmus in right Dix & Hallpike position, as well as the same characteristics of benign paroxysmal positional vertigo as shown in the previous case.

The therapeutic attitude was the same, also requiring a single Epley maneuver of otoconial repositioning. A week later, examination revealed the absence of vertigo and nystagmus in the characteristic position.

## Discussions

Even though the most frequent cause of vertigo caused by a peripheral vestibular lesion, BPPV is often misdiagnosed.

A higher incidence of BPPV was measured in diabetic patients (14% versus 5%) or hypertensive ones (52% versus 22%)<sup>3</sup>, both affections having the possibility of occurring during pregnancy. Low blood calcium levels can increase the possibility of BPPV, without any statistical evidence.

The diagnosis of the condition is exclusively based on history and bed-side examination (evaluation of the presence of nystagmus and observing its characteristics, ideal when using Frenzel glasses or infrared cameras). If the patient

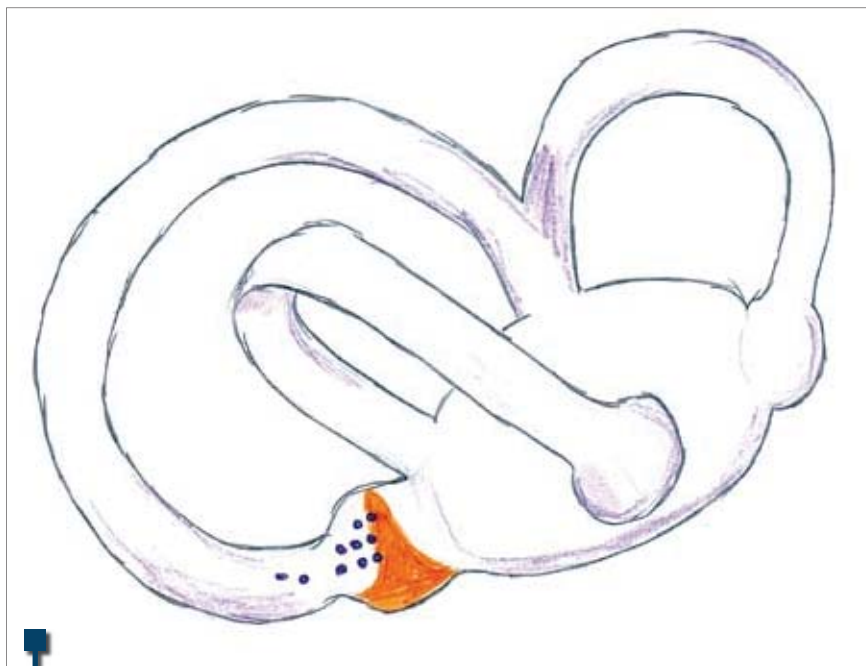


Figure 1. Canalolithiasis

doesn't show a pre-existent vestibular pathology (Meniere disease, viral vestibular neuronitis, labyrinthitis), the results of auditive and vestibular tests would be within normal ranges<sup>2</sup>.

Clinically, there are a few particularities that allow us the diagnosis of BPPV1:

- the apparition of nystagmus only in a certain position, specific for each semicircular canal
- nystagmus has latency
- the direction and sense of nystagmus is specific to vertical or horizontal canals
- nystagmus has fatigability if characteristic position is maintained (1 min)
- repeating the on-setting movement will decrease in effect, due to the dispersion of free fragments throughout the endolymph, as well as the adaptability of central vestibular structures.

The election treatment for BPPV is physical. It consists in specific re-

positioning maneuvers, characteristic for each semicircular canal.

In the two cases presented above, the otoconial repositioning had no problems, the age of the pregnancy being a potential physical limit for the maneuver, but both patients worked really well. The movement restraints for the following 48 hours induced a higher discomfort for the second patient, due to the advanced pregnancy (31 weeks).

## Conclusion

Acknowledgement of the high incidence of BPPV among general population allows the early diagnosis of the condition by the ENT physician, as well as its treatment. Even though benign, the condition has an important impact over patients' quality of life. What is more, the otoconial repositioning is easy to manage with a precise diagnostic and, as a physical treatment, bears no risk for neither the pregnant woman, nor the fetus. ■

## Bibliografie

1. Dr. Mădălina Georgescu. Evaluarea pacientului amețit. Ed. Maiko 2005.  
2. Neil T. Shepherd Md. PhD Benign Paroxysmal Positional Vertigo Identification and Treatment ASHA Nov 2005.

3. Von Brevern M, Radtke A, Lezius F et al. Epidemiology of benign paroxysmal positional vertigo: a population based study. J Neurol Neurosurg Psychiatry 2007; 78:710-5.