



## Editorial comment

# An overlooked cause of head- and neck-pain: Chronic canalithiasis, or Benign Paroxysmal Positional Vertigo – BPPV

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In this issue of the *Scandinavian Journal of Pain*, Wenche Iglebekk and co-workers report an observational study of patients referred from their GP for physiotherapy of musculoskeletal pain. Patients ( $N=43$ ) with head- and neck-pain of at least one year and with a positive *Dizziness Handicap Inventory* (DHI) were selected for the study [1]. These patients were investigated for symptoms and objective signs indicating Benign Paroxysmal Positional Vertigo (BPPV): A history of dizziness provoked by sudden acceleration or deceleration movements and nystagmus (video-oculography) during the test positions for otoliths in one or more of the semicircular canals (SCCs) of the vestibule of the inner ear [1–3]. Most of the patients had severe neck pain, headache, and chronic fatigue. The patients often had visual disturbances, tinnitus, sleep disturbances, difficulties concentrating, and poor short-term memory. Physical exertion aggravated the symptoms. About half of the patients had pain in the temporo-mandibular region, generalized pain, nautical vertigo or combined rotatory and nautical vertigo, dizziness, and nausea. These 43 patients were treated with the specific otolith repositioning manoeuvres, depending on which SCC had symptom-giving otolith(s) [1].

Clearly these patients were severely burdened and handicapped by their chronic complex pain condition that had lasted a median of 5 years. After treatment they were followed up with a questionnaire for up to two years. The outcomes after a median of 7 months in the 39 of 43 patients who returned the questionnaire were impressive: Most of the patients reported “much improved” in most of the symptoms; some were free of symptoms. Even work capacity improved in most of the patients [1].

## 1. Results too good to be true?

This is not a double blind, randomized, controlled clinical trial (RCT). The patients are highly selected having some of the symptoms and signs of classical otolith disturbances, for which the

otolith repositioning manoeuvres are well documented to be effective [2]. These patients were referred from their GP, some from neurologists, with complex, difficult to understand and difficult to treat chronic musculoskeletal pain conditions, with symptoms such as chronic fatigue, sleep-disturbances, difficulties concentrating, poor or no effect of analgesic drugs including opioid analgesics. This is all typical for long-lasting complex pain conditions.

The authors should be commended for thorough examination and for diagnosing a condition that clearly can be treated effectively [1]. But is this observational study enough evidence that the treatment has specific effects that are so impressive?

## 2. Unspecific, context-sensitive therapeutic effects

Patients, who have suffered from a difficult to understand pain condition for a long time, often meet health care professionals who demonstrate sceptical attitudes to a symptom complex without clear somatic origin. Their diagnosis may become “idiopathic pain”. Unfortunately, often this implies “psychogenic” pain-mechanisms. A minor trauma may have started the patient’s career as a difficult chronic pain patient. This may be interpreted as a patient who is at least aggravating, even suspected of simulating, their subjective pain, fatigue, and all the other unspecific symptoms. Many patients interpret signals from health care helpers to mean that their pain condition must somehow be connected to their psycho-social background.

For a patient with a complex pain condition, who after many disappointing encounters with the health care system, finally meets a team who takes seriously all the accompanying symptoms and complaints, this alone has positive effects on the patient’s suffering. Notwithstanding the fact that most of the patients of Iglebekk and co-workers had objective signs of canalithiasis, the dramatic manoeuvres in the otolith repositioning chair are bound to have a strong context-sensitive therapeutic effect. A patient, who receives the “saltomortale manoeuvre” in the canalithiasis treatment chair [1], is bound to be impressed! It is also an important part of their therapeutic program that the patients are given “homework”: The patients are instructed to exercise

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the various balance components (vision, vestibular function, and proprioception) by walking on uneven surfaces [1].

In order to obtain solid “medical evidence base” for the treatment program described by Iglebakk and co-workers [1] for musculoskeletal pain with accompanying signs of canalithiasis, a proper RCT should be performed. But is this possible? A well performed and in detail described observational study is probably the best we can hope for. It should be possible to randomized such patients to “treatment as usual” or to the specific canalithiasis repositioning regimen. There must be more clinicians in the Nordic countries who see similar pain patients and who have the equipment and resources to reproduce the excellent results demonstrated by Iglebakk and co-workers [1].

### 3. Why should vertigo and dizziness contribute to or aggravate chronic neck pain?

Almost 80% of the 39 patients had a history of head or neck trauma from traffic accidents, fall accidents, or sports injuries, 40% even fulfilled criteria for the diagnosis of whiplash associated disorder (WAD) [1]. The 20% who could not remember any injuries or trauma had the same symptomatology and response to treatment [1]. The authors theorize that because the otoliths constantly float around in the semicircular canals, the patients suffer from a dynamically changing balance disturbance; neck muscles are actively engaged in compensating for the changing balance situation, the muscles are overloaded and musculoskeletal pain ensues [1,3].

### 4. Physicians, nurses, physiotherapists (and everybody else!) see only what we are looking for

Medical history demonstrates again and again that the training and culture of physicians have created effective blind-folding for obvious (as seen later) interpretation of symptoms of pathological mechanisms. The tragic story of Ignaz Philipp Semmelweis, who in 1844 understood why postpartum deaths was so frequent in Vienna, he even proved that the problem could be removed by washing hands of medical students and physicians after examining corpses in the autopsy rooms and before vaginal examinations in the delivery rooms. His observations were not acknowledged, the professor of the University Hospital believed in the miasma-theory at the time, and he thought the reasons for the declining puerperal fever and maternal mortality was due to better ventilation; in fact Semmelweis lost his position in Vienna and he returned to Budapest. Not until 20 years after his death and more than 30 years after his discovery was his reputation restored.

“Stress” and psychosomatic mechanism for peptic ulcer disease, the treatment of which with diets and psychological approaches continued long after a Greek physician had cured many thousand

patients with his antibacterial drugs and bismuth (he was not able to get his manuscript accepted in any of the medical journals he tried), and even long after the spirochete *Helicobacter pylori* was proven as the specific cause of ulcer disease by the Australian physicians Warren and Marshall in 1982.

I have observed a similar phenomenon in diagnosing the frequently occurring *central anticholinergic syndrome* after general anaesthesia and after numerous commonly used drugs – and its effective treatment with physostigmine [4]. It is misdiagnosed as delirium and the patients are sedated with e.g. midazolam that increases the central anticholinergic effects of other drugs.

The *serotonin syndrome*, caused by drugs frequently used for treatment of chronic pain, appears to be completely invisible to most physicians and nurses, a fact that may be behind the unexpected fatal complications of tramadol combined with antidepressant medications for chronic pain [5].

I am afraid that patients who present with a chronic pain condition similar to the patients described by Iglebakk and co-workers, patients who have a curable cause of their chronic pain will continue to be overlooked by most GPs and even “pain-specialists” [1–3] – because we “see only what we are looking for”.

### 5. Therefore: look for signs and symptoms of canalithiasis in chronic pain-patients with dizziness

When symptoms and signs of canalithiasis are hidden in a story of long-term musculoskeletal pain, they are difficult to detect. Unless we are aware of this phenomenon and look for it, most such patients with a curable cause of their complex pain condition are easily overlooked, and they miss the opportunity to receive a specific treatment that, in the educated hands, is so effective that it is almost difficult to believe it is true [1]. The *Dizziness Handicap Inventory* (DHI) as a screening tool should be at hand in pain clinics [1].

### Conflict of interest

No conflict of interest declared.

### References

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