

LETTER TO THE EDITOR

**Antisecretory Factor: A Clinical Innovation in Ménière's Disease?**

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A 67-year old woman with severe Ménière's disease (MD) was referred to our ENT Department in 2001. Clinical examination revealed a normal otoneurological status, except for a right-beating nystagmus after headshake, indicating a vestibular disorder. The audiogram demonstrated sensorineural hearing loss affecting all frequencies in the right ear. The patient had initially experienced rotatory vertigo, hearing loss and tinnitus in her right ear in 1968 when aged 34 years. These attacks lasted between 8 h and 3 days and were frequently accompanied by severe nausea, vomiting and diarrhoea. No form of conventional medical treatment, either alone or in different combinations, was found to counteract the severity of the disease.

As we had previously achieved beneficial clinical outcomes for MD using a diet of specially processed cereals (SPC), a potent stimulator of antisecretory factor (AF), the patient was given an SPC diet for 2 months (1). However, the SPC therapy affected neither the frequency nor the duration of her MD attacks, and her AF plasma activity level remained low. Therefore, a passive form of AF therapy, i.e. AF in the form of egg yolk drinks, prepared from eggs with a verified high content of AF (Salovum®; BioDoc AB, Stockholm, Sweden), was offered to the patient five times daily. Each egg drink consisted of 2 g of freeze-dried egg yolk. On Day 18, the patient experienced total and complete remission. According to the American Academy of Otolaryngology—Head and Neck Surgery guidelines for MD, the patient's status changed on the functional scale from 6 to 1 (2). After 6 months of health on a constant regimen of AF-egg drinks, the patient reduced the dosage and experienced an immediate relapse in terms of severe rotatory vertigo attacks. A return to the original dosage promptly produced a clinical improvement, and the patient was subsequently free of vertigo attacks, without the need for other forms of medical treatment. However, the right-sided hearing loss did not respond to the AF-egg therapy.

AFs are endogenous proteins with the capacity to counteract experimental hypersecretion in the small

intestines of the rat and pig. AF has been cloned and sequenced (1). Endogenous stimulation of AF occurs in response to peroral intake of bacterial toxins, sugars, amino acids and SPC. Stimulation of AF synthesis has proven effective in reducing not only intestinal hypersecretion, but also intestinal inflammation, in humans and animals (1). However, some patients do not respond to SPC intake, and we suggest that this type of "non-responder" should be offered passive AF administration in the form of AF-egg therapy.

Regulatory dysfunction in the cells that control transport and synthesis of endolymph in the inner ear may cause what is pathophysiologically classified as endolymphatic hydrops (3, 4). Using immunohistochemistry, we found irregular AF immunoreactivity in the epithelial cells lining the endolymphatic space of the human cochlea, in addition to distinct staining of the neuronal cells of the spiral ganglion. This localization suggests an important role for endogenous AF activity in endolymphatic production, circulation and inner ear pressure. Furthermore, these morphological results suggest a regulatory role of endogenous AF in the development and/or clinical outcome of MD. The clinical handling of our MD patient represents a new type of treatment according to the definitions outlined in the previous *Lancet* debate (5). Although proof of concept requires a randomized controlled study, we suggest that those MD patients who are classified as "non-responders" to SPC intake may benefit from AF induction in the form of AF-egg drinks. Moreover, the development of the AF-egg drink treatment should result in both clinical efficacy and economic benefits.

REFERENCES

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