

Pregabalin Relieved Gingival Pruritus Associated with Oral Dysesthesia: A Case Report

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Abstract: Most pruritus occurs in association with skin diseases; but gingival pruritus seldom seen in association with oral dysesthesia. Most clinicians, including dental practitioners, do not know about how to deal with gingival pruritus. Our patient was a 74-year-old Japanese female who attended the Department of Oral Medicine, Tokushima University Hospital, because of gingival pruritus. Pregabalin was begun at a dosage of 50 mg twice daily, and increased up to 150 mg. The pruritus was improved 4 weeks after treatment initiation, and disappeared 6 weeks later. Pregabalin dosage was subsequently tapered down and withdrawn 34 weeks after initiation. The patient accomplished the treatment goal without adverse events. Pregabalin remarkably relieved gingival pruritus associated with oral dysesthesia, and may become a new therapeutic option for the treatment of gingival pruritus.

Keywords: Pregabalin, Gingival pruritus, Oral dysesthesia

I. INTRODUCTION

Most pruritus occurs in association with skin diseases; but it is seldom seen in association with oral diseases. Pruritus is thought to be caused by inflammatory, systemic, neuropathic, or psychogenic disorders [1]; its pathophysiology is still unclear. Thus, most clinicians, including dental practitioners, do not know about how to deal with gingival pruritus.

II. CASE REPORT

Our patient was a 74-year-old Japanese female who attended the Department of Oral Medicine, Tokushima University Hospital, because of spontaneous glossalgia and gingival pruritus. She was on medication for hypertension and insomnia. Her medical history was taken, and we performed oral examination, panoramic x-ray radiography, blood examination, culture, and salivation test. The patient was diagnosed with oral candidiasis because *Candida albicans* was detected in the culture test. Her symptoms persisted, however, despite fungal decontamination by antifungal treatment. Burning mouth syndrome was the next suspected cause. Treatment with powdered processed aconite roots resolved the glossalgia; gingival pruritus associated with oral dysesthesia still remained. Pregabalin (Lyrica®, Pfizer Japan Inc., Tokyo, Japan) was begun at a dosage of 50 mg twice daily, and increased up to 150 mg (Figure 1). The response to pregabalin treatment was evaluated using a visual analogue scale (VAS: 0-100 mm) representing pruritus intensity [2]. The pruritus was improved 4 weeks after treatment initiation, and disappeared 6 weeks later (Figure 1). The values of VAS decreased from 79 mm to 0 mm after 6 weeks of treatment (Figure 1). Pregabalin dosage was subsequently tapered down and withdrawn 34 weeks after initiation. The patient accomplished the treatment goal without adverse events.

III. DISCUSSION

Pregabalin is an anticonvulsant that has been used for treatment of neuropathic pain [3], and was recently reported to be effective against several types of pruritus [1,4,5]. Pregabalin, as an alpha2-delta ($\alpha_2\text{-}\delta$) ligand for neuronal voltage-gated calcium channels, reduces calcium reflux into nerve terminals and suppresses the release of presynaptic neurotransmitters such as glutamate, noradrenaline, and substance P [3]. Although the action mechanism of pregabalin in pruritus is currently unclear, the drug is reported to have both central and peripheral actions [4], because both signals of pain and pruritus are transmitted by unmyelinated C fibers in the dorsal horns reaching the thalamus [1]. Pregabalin is also reported to inhibit calcitonin gene-related peptide mediating pruritus [5]. Fortunately, significant adverse events did not occur in our case; dizziness, somnolence, peripheral edema, dry mouth and so on have been reported as common adverse events [1]. Careful titration of doses and monitoring by laboratory tests is necessary to prevent adverse events. Tricyclic antidepressants (TCAs), serotonin noradrenaline reuptake inhibitors (SNRIs), and selective serotonin reuptake inhibitors (SSRIs) are usually used for the treatment of pruritus [1]; their effects on gingival pruritus have not been

reported. It is unclear whether these medicines relieve gingival pruritus associated with oral dysesthesia. Continuous collection of cases and further investigation are required to clarify that question.

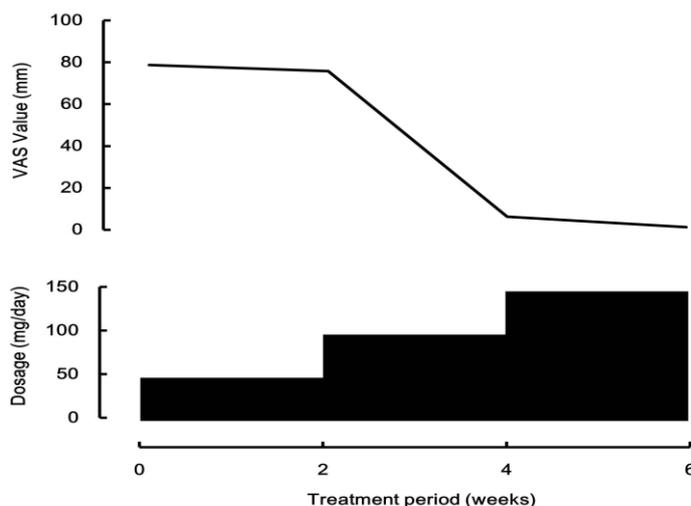


Figure1 Time course of VAS values of gingival pruritus and dosage of pregabalin.

IV. CONCLUSION

Pregabalin remarkably relieved gingival pruritus associated with oral dysesthesia. Therefore, pregabalin may become a new therapeutic option for the treatment of gingival pruritus.

Conflict of Interests

The authors have no conflicts of interest to declare regarding this study and the publication of this paper.

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REFERENCES

- [1] G. Yosipovitch, J. D. Bernhard, Clinical practice. Chronic pruritus, *N Engl J Med*, vol. 368, pp. 1625-1634, 2013.
- [2] A. Reich, M. Heisig, N. Q. Phan, et al, Visual analogue scale: evaluation of the instrument for the assessment of pruritus, *Acta Derm Venereol*, vol. 92, pp. 497-501, 2012.
- [3] B. F. Shneker, J. W. McAuley, Pregabalin: a new neuromodulator with broad therapeutic indications, *Ann Pharmacother*, vol. 39, pp. 2029-2037, 2005.
- [4] G. Porzio, F. Aielli, L. Verna, et al, Efficacy of pregabalin in the management of cetuximab-related itch, *J Pain Symptom Manage*, vol. 32, pp. 397-398, 2006.
- [5] J. Ehrchen, S. Stander, Pregabalin in the treatment of chronic pruritus, *J Am Acad Dermatol*, vol. 58 (Suppl), S36-S37, 2008.