Therapeutic Effects of Argon Plasma Coagulation (APC) on Patients with Severe Allergic Rhinitis

Hideaki Tsuzuki and Kenzo Tsuzuki

OBJECTIVES: Argon plasma coagulation (APC), performed as an outpatient procedure, is used to treat severe allergic rhinitis (AR) that is unresponsive to drug therapy. The purpose of this study was to determine the therapeutic effects of APC on patients with perennial AR (PAR) or seasonal AR (pollinosis), and to confirm complications after APC.

METHODS: We performed bilateral APC under local anesthesia on 387 patients with PAR or Japanese cedar pollinosis at our clinic between November 2007 and August 2012. Postoperative changes in nasal symptoms including sneezing, nasal discharge and nasal obstruction, and intranasal findings were evaluated using a visual analogue scale (VAS) and the nasal grading score respectively, according to the Practical Guidelines for the Management of Allergic Rhinitis in Japan in 2013.

RESULTS: In patients with PAR, the mean VAS scores of nasal symptoms improved in 6 months after APC. The severity of RAST scores to house dust, cauterized level, and nasal septum deviation did not show significant influence on the improvement of nasal obstruction after APC. In patients with pollinosis, the mean VAS score of nasal symptoms showed an improvement of 40-60% for one season after APC. Our data also indicated that the most proper time for APC in seasonal AR was for 2 months before the pollen dispersion. As regards to major postoperative complications, atrophy of the inferior turbinate (8%) and epistaxis (3%) were observed. The patients more than 40 years old and/or with RAST scores less than class 3 to house dust were found as significant high risk factors of inferior turbinate atrophy after APC.

CONCLUSIONS: These results indicated that the APC is a useful treatment for patients with AR.

Keywords: Argon plasma coagulation (APC), perennial allergic rhinitis, pollinosis, visual analogue scale (VAS), postoperative evaluation

References
1) Miyako Ear, Nose, and Throat Clinic
2) Department of Otolaryngology, Hyogo College of Medicine

Corresponding Author Address: Hideaki Tsuzuki
htsuzuki@ma.medias.ne.jp

1) Miyako Ear, Nose, and Throat Clinic
2) Department of Otolaryngology, Hyogo College of Medicine

16) 竹野幸夫, 中下陽介, 石野岳志, 他: 炭酸ガスレーザーによる下鼻甲介粘膜焼灼術の長期治療成績. 日鼻科会誌 50: 7-12, 2011.

Diachronic curative effect of APC for PAR
The inferior turbinate edema and the quantify of nasal discharge in the 4 PAR cases improved after APC.

Diachronic curative effect of APC for pollinosis
40-60% improvement in the 3 nasal symptoms was observed for 3 seasons after APC. The mean VAS scores of the 3 nasal symptoms, especially nasal obstruction, remained significantly improved for 1 season between before and after APC (P < 0.05).