Living-donor Lobar Lung Transplantation in *Sauropus androgynus*-associated Bronchiolitis Obliterans in Japan

Key words: *Sauropus androgynus* (SA), bronchiolitis obliterans (BO), living-donor lobar lung transplantation (LDLLT)

In 1996, an outbreak of *Sauropus androgynus* (SA)-associated bronchiolitis obliterans (BO) occurred in Taiwan (1). SA is a leafy vegetable; it proved to be the cause of BO according to an epidemiological study (2). The SA-associated BO patients had a poor prognosis, and some had received cadaveric lung transplantation in Taiwan (1). In 2003, we reported the first SA-associated BO patient in Japan. Subsequently, we performed a nationwide survey and reported five similarly affected patients in Japan (3). The Japanese Ministry of Health, Labor and Welfare immediately took response and stopped the distribution of the dried powder form of SA. Here, we report the first Japanese SA-associated BO case who underwent living-donor lobar lung transplantation (LDLLT).

The patient is a 47-year-old woman. She took a total of 1,000 g of dried SA powder during a period of 130 days. Her FEV$_{1.0}$ (forced expiratory volume in 1 second) was 0.64 l (FEV$_{1.0}$/forced vital capacity was 36.4%). She received corticosteroids, bronchodilators and erythromycin; however her pulmonary function deteriorated. She received LDLLT on March 15, 2004. The gross findings of the resected native lungs revealed generalized emphysematous changes. Microscopically, BO was seen from the level of the small bronchi to the respiratory bronchioles. The main pathological features of BO are proliferative BO (organizing intraluminal exudates containing fibroblasts, inflammatory cells and foamy macrophages: Fig. 1A) and constrictive BO (submucosal fibrosis causing obliteration of the bronchiolar lumen: Fig. 1B). The native lungs had both of these types. These findings are similar to those of Taiwanese patients (4).

The prognosis of SA-associated BO patients who received cadaveric lung transplantation is not good and some cases died within 1 year after cadaveric lung transplantation (1). LDLLT is reported to provide better survival than cadaveric lung transplantation (5). The patient is recovering well after LDLLT. As of this writing (April 27, 2005), she is able to resume her previous level of activity prior to consumption of SA. So LDLLT might be a good option for the treatment of severe SA-associated BO.

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Figure 1. Histological findings (Elastica van Gieson stain,×50) of the resected native lungs. The main pathological features of BO are proliferative BO (organizing intraluminal exudates containing fibroblasts, inflammatory cells and foamy macrophages: A) and constrictive BO (submucosal fibrosis causing obliteration of the bronchiolar lumen: B).
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