A 65-year-old man with persistent atrial fibrillation (AF) underwent laser balloon (HeartLight, CardioFocus, Marlborough, Massachusetts) ablation of all 4 pulmonary veins (PVs) 30 months ago. The minimal dose of 5.5 W was used for 30 s in areas overlapping with blood. Seven watts was used for other areas, and a higher wattage (<10 W) was used only when PVs were not isolated at the first attempt. The number of energy applications during the procedure to a PV was 29 to the left superior PV, 27 to the left inferior PV, 44 to the right superior PV, and 32 to the right inferior PV, and delivered around the PV ostium in a contiguous manner with approximately 50% lesion overlap. The preprocedure high-resolution computerized tomography (CT) scan and intraprocedural left atrial angiogram of PVs were normal. The CT scan 6 months after the procedure revealed fusiform stenosis of the left inferior PV ostium. Its dimension at the ostium was 15 mm \times 10 \text{ mm}, and at 1 cm after the ostium, was 22 mm \times 14 \text{ mm} (Figure 1). This was corroborated during the subsequent epicardial ablation of the left PVs, showing remarkable segmental fibrosis leading to a narrowing of the left inferior PV (Figure 2). The laser balloon is a novel device with an efficacy similar to radiofrequency and cryoablation (1). Previously, Dukkipati et al. (2) reported mild PV narrowing (1% to 25% decrease in diameter) in 44% of PVs, and moderate PV narrowing (26% to 50% decrease) in 6% of PVs, but without any cases of significant PV stenosis. PV stenosis is an important complication of AF catheter ablation, reported in 1% to 21% of patients using radiofrequency and or cryothermal energy. The ablation energy causes thermal injury to the PV tissue to create electrical isolation of the PV but may also cause fibrosis and adhesions. The location and volume of the fibrosis may lead to PV narrowing. Most patients are asymptomatic but later may develop dyspnea, cough, and hemoptysis.

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depending on several factors, for example, the number of PVs affected, the time course of stenosis, and the presence and the extent of collaterals. Imaging modalities such as CT scan, magnetic resonance, and transesophageal echocardiography are used for visualizing the culprit PV so as to confirm the diagnosis of PV stenosis (3). In this patient, none of the laser applications was within the PV. Visual assessment during the procedure confirmed that all applications were delivered in the ostium. However, because of the unsuccessful first attempt to isolate the PV during the same procedure, additional energy applications were given, which might have contributed to its stenosis.

**REFERENCES**

