A 34-year-old male patient with abdominal pain and weight loss, without any known chronic disease, was referred to our clinic for Fluorine-18 fluorodeoxyglucose positron emission tomography/computed tomography ($^{18}$F-FDG PET/CT) scan for malignant etiology due to the detection of a mass lesion in abdominal computed tomography (CT). Sedimentation: 34 mm/hour, CRP: 8.3 mg/dl, PPD test and sputum ARB test were negative. Abdominal CT showed a mass lesion with soft tissue density extending from the infrarenal level of bilateral iliac artery bifurcation, surrounding the aorta, inferior vena cava, bilateral common iliac veins and ureters, and bilateral Grade 1 hydronephrosis was observed. ($^{18}$F-FDG PET/CT imaging showed intense hypermetabolism with the heterogeneous character in the mass lesion with soft tissue density, which was measured approximately $83 \times 61 \times 39$ mm in size on CT sections of the abdomen (SUVmax: 8.7). The appearance was considered in favor of malignancy and histopathological examination was recommended. However, the histopathological examination could not be performed because the patient’s consent could not be obtained. Idiopathic retroperitoneal fibrosis (RF) were considered considering the clinical, laboratory, and imaging findings of the case. Methylprednisolone was started at 64 mg/day, the dose was decreased according to the clinical response and discontinued during the sixth month. In the fourth month, 50 mg of Azathioprine was added, and patient follow-up continued. After six months of treatment, the patient’s clinical and laboratory findings improved. ($^{18}$F-FDG PET/CT examination was performed in terms of control and response to treatment. ($^{18}$F-FDG PET/CT showed that the hypermetabolic mass lesion in the retroperitoneal area of the abdomen was metabolically and morphologically completely regressed (Fig. 1).

Idiopathic RF is a rare disease also known as Ormond’s disease [1, 2]. RF causes inflammation and fibrosis by surround-
ing retroperitoneal organs such as the abdominal aorta, vena cava, and ureters [1–5]. Although it is generally seen as idiopathic, it can also develop secondary to malignant diseases, infections, radiotherapy, after major surgical procedures, trauma, asbestos exposure, and after the use of some drugs [1, 2, 4, 5]. Some cases of RF can be associated with Immunoglobulin G4-related disease [1, 2, 5]. In this case, we investigated the usefulness of (18)F-FDG PET/CT in the diagnosis of RF and the evaluation of response to treatment. (18)F-FDG PET/CT can visualize inflammatory tissue noninvasively. (18)F-FDG PET/CT is a functional imaging method that has an important role in the diagnosis and follow-up of the response to RF. Also, the selection of the biopsy site, different organ involvement, and evaluation of the response to treatment in the interval make important contributions.

Conflict of Interest

The authors declare that they have no conflict of interest.

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