DOI: 10.5152/TurkThoracJ.2019.206

[Abstract:0517] OP-066 [Accepted: Oral Presentation] [Lung Transplantation]

Acute Rejection Presenting as Diffuse Panbronchiolitis After Lung Transplantation

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Introduction: Despite advances in immunosuppressive therapy, acute rejection (AR) after lung transplantation is reported as about 28% in the first year. Acute cellular rejection is staged according to the presence of peribronchial, perivascular or interstitial lymphocytic infiltration and bronchial inflammation. It is not usual to present as panbronchiolitis.

Case Presentation: A 53-year-old female patient underwent bilateral lung transplantation in January 2018 with the diagnosis of lymphangioleiomyomatosis admitted to us with dyspnea and cough complaints at the postoperative 9th month. Nodular formation and bud-in-tree signs were observed in bilateral lower zones on thorax computed tomography. Fiberoptic bronchoscopy (FOB) was performed to obtain gram staining and required bacteriological, viral and fungal cultures, furthermore transbronchial biopsy was performed to evaluate whether the rejection was present. Empirical antibiotic, antifungal (voriconazole) and antiviral (ganciclovir) treatments were started. FOB and TBB were repeated because there was neither specific pathogen for lung infection nor specific pathology for rejection in the investigations. Acide resistant bacillus and tuberculose culture tests were negative. Open lung biopsy was planned because the materials were not diagnostic and clinical progression was developed. Right minitoracotomy and lung wedge resection were performed. Pathological examination revealed a diffuse panbronchiolitis characterized by peribronchiolar CD3, CD20 positive lymphocyte infiltration and CD138, kappa and lambda positive plasma cell infiltration whereas bacillus, fungi and amyloid were not detected. Intravenous pulse steroid treatment was started due to clinical and histopathological findings. Clinico-radiological improvement was observed and the patient was discharged with healing. Pulmonary function test performed the outpatient control of her showed 30% increase in FEV_1 and 20% increase in FVC.

Conclusion: Acute rejection presented as a panbronchiolitis is not a common condition in lung transplantation. In patients with clinical and radiological deterioration after transplantation, rejection should be kept in mind and if necessary, diagnostic interventions reaching to surgical lung biopsy should be performed quickly.

Keywords: Acute rejection, lung transplantation, panbronchiolitis