Sirolimus induced pneumonitis

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Sirolimus is an immunosuppressive agent, which replaces calcineurin inhibitors, but serious adverse effects have been reported. We report a rare case of sirolimus-induced pneumonitis. A 59-year-old male who underwent living donor kidney transplantation for IgA nephropathy used tacrolimus, mycophenolate mofetil, and steroid for 20 months, and changed tacrolimus with sirolimus due to both lower extremities tingling sense. After 5 weeks, the patient visited emergency department with fever persisting for 1 week. He had no other symptoms such as cough, sputum, or dyspnea. Chest PA showed suspicious peribronchial infiltrations in both lungs. Initial lab data showed mild leukocytosis and CRP elevation. Chest CT showed diffuse ground glass opacities in bilateral upper lobes, peribronchial infiltration and multifocal patchy consolidations in bilateral lower lobes. Image findings showed possibility of atypical pneumonia, including pneumocystis pneumonia and CMV pneumonia or other viral infection. Bronchoscopy showed no endobronchial lesions, and bronchial washing and bronchoalveolar lavage fluid analysis was done. Sirolimus TDM was 9.3 ng/mL. We discontinued sirolimus immediately and changed into tacrolimus. Before BAL fluid analysis results were confirmed, we started empirical antibiotics and antiviral agents to cover all possible pathogens. We increased maintenance prednisolone dose from 5mg to 10mg for 3 days. Fever subsided at the day of admission and CRP level decreased to normal range. PCP DNA and CMV culture from BAL fluid was confirmed negative, so trimethoprim/sulfamethoxazole and ganciclovir were discontinued. There were significant improvements on chest PA, and lab data showed improving clinical course. By exclusion, the patient was diagnosed as sirolimus-induced pneumonitis and discharged with tacrolimus as an alternative immunosuppressant. The pathophysiology of sirolimus-induced pneumonitis is unknown, but reported cases equally shows clinical and radiological improvement after the discontinuation of sirolimus. In patients on sirolimus with evidence of atypical pnneumonia, discontinuation of sirolimus should be considered due to its rare complication.