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## **Prophylaxis and Outcomes of Pneumocystis jiroveci Pneumonia in Renal Transplant Recipients in Korea**

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**Objectives:** Pneumocystis jiroveci pneumonia (PJP) is a life-threatening opportunistic infection in kidney transplants recipients (KTRs). Several guidelines recommended PJP prophylaxis by using Trimethoprim/sulfamethoxazole (TMP/SMX) after transplantation; however recommended duration of prophylaxis is variable. Furthermore, there is no consensus even on PJP prophylaxis in Korea because the absolute incidence of PJP is unclear and the evaluation of risk factors for PJP has not been performed in KTRs. Therefore we investigated the incidence, prophylaxis regimen and outcomes of PJP in Korea.

**Methods:** We analyzed adult kidney transplantation from 2014 to 2017 using the KOTRY (Korean Organ Transplantation Registry) data. We also survey the PJP prophylaxis regimen at 32 transplant centers participating the KOTRY by e-mail.

**Results:** The survey of KOTRY transplant centers showed that 30 centers adopted PJP prophylaxis and TMP/SMX as one single-strength tablet per day was the most common PJP prophylaxis regimen. Three of 30 centers indicated that PJP prophylaxis was prescribed only for KTRs receiving desensitization or anti-thymocyte(ATG) induction. The prophylaxis duration ranged median of 6 months (range, 0-12). Thirty-two KTRs developed PJP despite PJP prophylaxis; however five cases occurred after 12 months. Twelve KTRs of PJP cases underwent desensitization prior to transplantation, and ATG induction was used in 5 of PJP cases. Five of PJP cases had history of steroid pulse therapy for acute rejection. Graft loss occurred in 3 PJP patients with the only cause of graft loss being rejection. Death occurred in 8 PJP patients, and 75% of death was attributed to PJP. History of desensitization and acute rejection was independent risk factors for PJP.

**Conclusions:** In conclusion, PJP prophylaxis using TMP/SMX for 6 months were most common practice in Korea, and we should be cautious for late PJP beyond 1 year. High mortality of PJP requests more attention to prevent PJP, especially in patients with desensitization or acute rejection.