Increased Incidence of Colorectal Advanced Neoplasm in Kidney Transplant Recipients

Jeehye Kwon1, Seong-Joon Koh2, Joo Sung Kim1, Jong Pil Im3
Department of Internal Medicine and Liver Research Institute, Seoul National University College of Medicine, Korea1, Department of Internal Medicine, Seoul National University Boramae Hospital, Seoul National University College of Medicine, Korea2

Background: Although the frequency of kidney transplantation (TPL) is rising, there are no consensus for its colonoscopic surveillance due to the lack of epidemiological data about incidence of colorectal polyp and neoplasm after TPL. The aim of this study was to investigate whether incidence of colorectal neoplasm increases in kidney transplant recipients compared to general population.

Methods: A total of 677 patients who underwent kidney TPL in Seoul National University Hospital from 1996 to 2008 and age- and gender-matched 900 healthy controls who received screening colonoscopy between 2010 and 2011 were analyzed. We retrospectively reviewed electronic medical records about patient’s demographic, clinical characteristics, use of immunosuppressive agents, colonoscopy findings, and histology of colon polyp. Cox regression analysis was performed to evaluate risk factors affecting development of advanced neoplasm in TPL patients.

Results: Of patients who underwent TPL, Two hundred forty eight patients were identified as receiving post-transplant colonoscopy. Overall adenomatous polyp was founded in to 23.4 % of TPL patients compared to 21.8 % of healthy controls (P=0.589). There is a significant difference in incidence of advanced neoplasm between two groups (P=0.003). Incidence of advanced neoplasm was higher in transplant patient aged 50 and over (P=0.009). Advanced neoplasm according to the lesion location did not significantly differ in transplant patients (P=0.557). In multivariate analysis, age was only associated with an increased risk of developing advanced neoplasm in TPL patients (adjusted odds ratio [aOR], 1.068; 95% confidence interval [CI], 1.007 to 1.134; P=0.029).

Conclusions: Incidence of overall colorectal adenoma was similar between two groups. However, development of advanced adenoma and colon cancer was significantly higher in kidney TPL patients. Authors suggest that kidney TPL patients aged 50 and over should be performed colonoscopy surveillance more strictly following currently recommended interval for general population.