

Peri-Appendiceal Red Patch and Pathogenesis of the Appendix in Ulcerative Colitis

Mitsunobu Matsushita · Toshihiro Tanaka ·
Yuri Fukui · Norimasa Fukata · Takahiro Wakamatsu ·
Kazuichi Okazaki

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To the Editor,

We read with interest the article by Rubin and Roth [1] on the peri-appendiceal red patch (PARP) in ulcerative colitis (UC). In 367 UC patients with distal colitis, 29 (7.9%) patients had PARP. In the 29 patients, 23 (79%) were male, none had prior appendectomy, 20 of 30 (67%) biopsy findings showed that the parallel histologic activity in the PARP and the distal colitis, and 11 of 21 patients (52%) with endoscopic follow-up progressed to more extensive disease. We believe that the pathogenesis of the appendix in UC patients should be highlighted.

Although UC is characterized by continuous and diffuse inflammation extending proximally from the rectum, PARP has been increasingly recognized in 48–86% patients with distal UC [2–4], as in the study of Rubin and Rothe [1]. Patients with PARP experience a more aggressive and relapsing disease courses compared with patients without PARP [3]. Many case–control studies suggest that previous appendectomy is rare in UC patients [2, 3]. Patients with previous appendectomy have a delayed onset of UC, a reduced need for immunomodulators and proctocolectomy, and a reduced relapse rate and extent of UC [5]. Moreover, we and several investigators have reported the improvement of UC after appendectomy, especially in young patients with PARP [2, 6].

The pathogenesis of UC has not been determined, but an abnormal mucosal immune response plays a major role in the occurrence and pathophysiology of UC [2, 4]. Extensive infiltration of lymphocytes, especially CD4+ T cells, has been observed in the inflamed mucosa of UC patients. Activated CD4+ T cells exhibit increased cytotoxic activity and secrete cytokines that enhance the inflammatory state, resulting in tissue injury. We have disclosed that the proportion of CD4+ early-but-not-mature-activated T cells is significantly increased in the appendix of UC patients [4, 7], and suspect that the appendix may be a priming site in the occurrence of UC. We therefore believe that the appendix should no longer be considered an evolutionary redundancy, especially in UC patients with PARP.

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M. Matsushita (✉) · T. Tanaka · Y. Fukui · N. Fukata ·
T. Wakamatsu · K. Okazaki
Third Department of Internal Medicine, Kansai Medical
University, 2-3-1 Shinmachi, Hirakata, Osaka 573-1191, Japan
e-mail: matsumit@hirakata.kmu.ac.jp