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Sat. Nov 21, 2026 10:25 AM - 11:40 AM JST | Sat. Nov 21, 2026 1:25 AM - 2:40 AM UTC | Room 5 (1F 102)

Symposium 7 Gut Microbiota and Colorectal Diseases: A Future Unlocked by the Microbiome

Moderator: Hiroto Miwa (Kawanishi City Medical Center, Japan), Tomohisa Takagi (Molecular Gastroenterology and Hepatology, Graduate School of Medical Science, Kyoto Prefectural University of Medicine, Japan)

[SY7-1] Right-sided Predominance of Primary Sclerosing Cholangitis–Associated Colitis: Insights from Gut Microbiota

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[Objective] Primary sclerosing cholangitis (PSC) is frequently associated with inflammatory bowel disease, and gut microbiota involvement has been suggested. We previously reported that *Klebsiella pneumoniae* (Kp) is frequently detected in PSC feces and is associated with disease activity and prognosis. PSC-associated colitis (PSC-colitis) is characterized by right-sided predominance, rectal sparing (RS), and backwash ileitis (BI); however, their frequencies vary among studies. This study aimed to investigate the significance of right-sided colitis by systematic evaluation of endoscopic images and by using a mouse model.
[Methods] We retrospectively analyzed PSC patients at our institution between January 2012 and July 2025. All colonoscopic images were reviewed, and PSC-colitis cases with evaluable active phase were included. For comparison, Ulcerative colitis (UC) without PSC (n = 3,419) were used to generate a 1:1 matched control group. In mice, PSC-derived Kp strains were orally administered, and their gut localization and bacterial translocation were quantitatively assessed.
[Results] Among 212 PSC patients, 170 (80.2%) had concomitant colitis. The majority (98.2%) exhibited a UC-like phenotype. In PSC with UC-like colitis and evaluable active phase endoscopy (n = 126), disease distribution was predominantly extensive (97.6%), with minimal left-sided (2.4%) and no proctitis, whereas UC-only patients showed extensive (66.7%), left-sided (20.6%), and proctitis (12.7%) ($P < 0.001$). RS and BI were significantly more frequent in PSC-colitis (92.1% vs. 11.1% and 24.1% vs. 3.2%, respectively; both $P < 0.001$). In mice, PSC-derived Kp preferentially accumulated in the ileocecal region and translocated to mesenteric lymph nodes draining this region.
[Conclusion] PSC-colitis is characterized by right-sided predominance, frequent RS and BI, and a phenotype distinct from UC. Preferential localization of PSC-derived Kp to the ileocecal region suggests a role for regional microbiota in the right-sided colon, consistent with gut–liver axis involvement.

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