

for Digestive Health Care, Atlanta, USA, ³Sapienza – University of Rome, Department of Radiological Sciences, Oncology, and Pathology, Rome, Italy, ⁴Nuovo Regina Margherita Hospital, Gastroenterology Department, Rome, Italy, ⁵Sapienza – University of Rome, Department of Pediatrics PICU, Rome, Italy

Background: Sparse data exist on the long-term outcomes of mucosal healing (MH) in children with Crohn's disease (CD). It is uncertain if a treat-to-target approach might be a clinically and cost-effective strategy improving deep remission (DR) rate and outcomes. Previously, we reported MH and DR rates on the entire GI tract by performing three pan-enteric capsule evaluations and applying a treat-to-target strategy over 52 weeks in children with CD. This study evaluates the impact of this approach at 104 weeks.

Methods: Children with known CD were prospectively recruited and underwent PCE at 0, 24, 52 and 104 weeks. Therapy was calibrated according to pan-enteric capsule endoscopy (PCE) and magnetic resonance enterography (MRE) results in a treat-to-target approach. Results at week 52 and 104 were compared, and long-term outcomes between patients with or without complete MH were calculated using an intention-to-treat (ITT) analysis of clinical relapse, need for steroids and/or treatment escalation, hospitalisation and surgery.

Results: Forty-eight patients were recruited at baseline and underwent a treat-to-target approach for one year. The 52-week assessment demonstrated a 58% DR rate compared with 21% of baseline ($p < 0.05$). In all, 42 underwent the 104-week PCE evaluation (2 developed an ileo-cecal valve stricture at 52 weeks; 4 were lost to follow-up). MH was present in 10 at baseline; 28 at 52 weeks. There was only 7% drop-off in MH compared with 1-year assessment. In ITT analysis, complete MH at 52 weeks was associated with decreased clinical relapse rate ($p < 0.003$), reduced steroid usage ($p < 0.0005$), fewer treatment escalation ($p < 0.0003$), and diminished hospitalisation rates ($p < 0.0001$). There was a decreased need for surgery, but not statistically significant ($p = 0.065$). The overall diagnostic yield of PCE, MRE and biomarkers were 54%, 37% and 33%, respectively ($p < 0.05$).

Conclusions: Treat-to-target approach can significantly increase DR rates on the entire GI tract by using PCE and it seems to be cost-effective. When MH is achieved by this strategy, it is sustainable (93%) over a one-year period and correlates with improved patient outcomes, including decreased need for steroids, treatment escalation, hospitalisation and surgery.

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The baseline features of patients with newly diagnosed moderate-to-severe ulcerative colitis in Korea: A population-based cohort study (the MOSAIK cohort)

S.J. Oh^{1*}, J.R. Moon¹, C.K. Lee¹, Y.M. Park¹, S.N. Hong², J.P. Im³, B.D. Ye⁴, J.M. Cha¹, S.-A. Jung⁵, K.-M. Lee⁶, D.I. Park⁷, Y.T. Jeon⁸, Y.S. Park⁹, J.H. Cheon¹⁰, H.-S. Kim¹¹, Y. Kim¹¹, H.J. Kim¹, H.J. Kim¹, the IBD research group of the Korean Association for the Study of Intestinal Diseases

¹Kyung Hee University School of Medicine, Seoul, South Korea, ²Sungkyunkwan University School of Medicine, Seoul, South Korea, ³Seoul National University College of Medicine, Seoul, South Korea, ⁴University of Ulsan College of Medicine, Asan Medical Center, Seoul, South Korea, ⁵Ewha Womans University School of Medicine, Seoul, South Korea, ⁶St. Vincent's

Hospital, The Catholic University of Korea, Seoul, South Korea, ⁷Department of Internal Medicine Kangbuk Samsung Hospital Sungkyunkwan University, Seoul, South Korea, ⁸Korea University College of Medicine, Seoul, South Korea, ⁹Eulji University College of Medicine, Seoul, South Korea, ¹⁰Yonsei University College of Medicine, Seoul, South Korea, ¹¹Medical affairs, Janssen Korea, Seoul, South Korea

Background: The incidence and prevalence of ulcerative colitis (UC) are increasing in East Asia, nationwide studies to identify clinical course and predictive factors of the disease are scarce. We are conducting a nationwide, prospective, hospital-based longitudinal cohort with a 5-year follow-up of the patients with moderate-to-severe UC to reveal the baseline characteristics and disease course in Korea.

Methods: Patients with newly diagnosed moderate to severe UC from 30 tertiary hospitals were prospectively included from August 2014 to March 2017. We collected data of demographic, clinical features, and medical record. To understand the determinants of health-related quality of life (HRQoL), patient-reported outcomes were also collected. All completed data were transferred via the web to a central database (ClinicalTrials.gov, NCT02229344).

Results: The 368 patients were enrolled and 355 patients who met eligible criteria were included. The mean age at diagnosis was 37.6 ± 15.22 years and 210 (59.2%) patients were male with a male to female ratio of 1.4:1. Peak age at diagnosis was 20–29 years (29.6%). The disease extent at baseline was 46.4% for E2, 43.6% for E3 and only 10.0% for E1. Patients with severe UC showed higher proportion of extensive colitis (70.8%). Higher initial CRP and ESR were significantly associated with severity and extent ($p < 0.05$). Of all initial treatment utilised for the patients, most patients were treated with systemic 5-ASA (87.9%) and about half of the patients were treated with systemic steroid (48.5%). Systemic steroid uses showed a positive association with both severity and extension ($p < 0.05$). In terms of HRQoL, bowel symptoms, systemic symptoms, and social functions were impacted by disease severity. Presenteeism, work impairment and social impairment were significantly higher in patients with severe UC ($p < 0.05$). A substantial number of patients initially presented with anxiety and depression (≥ 11 by HADS), 16.7% and 20.6%, respectively. Also severe patients showed significantly higher depression scores compared with moderate patients (6.5 ± 4.36 vs. 8.9 ± 5.18 , $p = 0.024$).

Conclusions: We are the first to report baseline features of moderate to severe UC in the Korean population. It shows male-predominance, a peak occurrence in the third decade, and high proportion of left-sided and extensive colitis. Work disability and psychological distress were negatively influenced by an increased disease activity and related to quality of life. Appropriate management should be administered according to clinical characteristics and disease activity. As disease activity contributes to quality of life, there remains a need for integrated care to modify psychosocial determinants.

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Does the circadian clock have a role in the pathogenesis of inflammatory bowel disease (IBD)?

Y. Weintraub^{1*}, S. Cohen¹, I. Dotan^{2,3}, R. Tauman^{3,4}, N. Chapnik⁵, O. Froy⁵

¹"Dana-Dwek" Children's Hospital, affiliated to the Sackler Faculty of Medicine, Tel Aviv University, The Pediatric Gastroenterology unit, Tel Aviv, Israel, ²Rabin Medical Center, Division of Gastroenterology,