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Background: Although there have been revolutionary improvements in care of IBD patients, considering the effect of lifelong disease with numerous relapses, one of our goals is to recognise burden of chronic symptoms such as fatigue which can significantly interfere with performance of everyday activities, and negatively impact on quality of life (QoL).

Methods: Randomly selected IBD patients were invited to anonymously fulfil multiple mixed-methods (quantitave/qualitative) Quality of Life questionnaires (SF-36, IMPACT, SIDBQ, IBD disk) in order to evaluate prevalence of fatigue as well as the variables associated with an increased risk of fatigue (using the Fisher's exact test).

Results: The study population included 70 patients (50.7% male, mean age 38.1 years, 55.7% Crohn's disease). The prevalence of fatigue was 48.6% and variables associated with an increased risk of fatigue were: anxiety/depression (p = 0.002), lower perception of general well-being (p = 0.03), sleep disturbance (p = 0.02), inadequate interpersonal interactions (p = 0.03) and unsatisfactory performance in educational and professional daily activities (p = 0.01). The presence of joint pain as a common extraintestinal manifestation of IBD was not associated with fatigue (p = 0.06).

Conclusion: Chronic fatigue is a debilitating symptom among adult patients with IBD. Anxiety/depression, lower perception of general well-being, sleep disturbance, inadequate interpersonal interactions and unsatisfactory performance in educational and professional daily activities were associated with fatigue in this Croatian cohort of IBD patients.

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ABO blood groups and ulcerative colitis: A hospital-based study in central Taiwan

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Background: The variations in ABO blood groups are reported to be associated with multiple disorders. Ulcerative colitis (UC) is a chronic and relapsing disease of the gastrointestinal tract with unclear etiology. The incidence and prevalence of UC are low but increasing in Taiwan The aim of our current study was to investigate the distribution of ABO blood groups in patients with UC and to explore its impact on disease severity.

Methods: From January 2000 to November 2019, we retrospectively collected patients diagnosed as UC in our hospital, a tertiary referral center in central Taiwan. Clinical characteristics of patients with UC including gender, age at diagnosis, ABO blood groups, disease phenotype and behaviour, operation rate and baseline laboratory data were collected.

Results: A total of 129 patients with UC were enrolled into our current study (Table 1). We found out male predominance as 62.8% of all patients. The mean diagnostic age of all UC patients was

39.0 years. Of 129 UC patients, 43 (33.3%) were blood type O, 41 (31.8%) were blood type A, 38 (29.5%) were blood type B, and the remainders 7 (5.4%) were blood type AB. However, there was no significant association between the ABO blood groups and UC patients compared with the general population of Taiwanese[1] (p = 0.1906) (Table 2). In the subgroup analysis of each blood type, there were no significant difference of disease location and operation rate between groups. Furthermore, blood type A UC patients had higher hemoglobin level compared with blood type O patients (13.31 g/dl vs. 12.30 g/dl, p = 0.0347). Blood type A UC patients had lower erythrocyte sedimentation rate (ESR) level compared with blood type O patients (12.46 mm/h vs. 21.5 mm/h, p = 0.0288). Blood type O UC patients had the highest ESR level compared with non-O groups (p = 0.0228) (Table 3). We analysed the characteristics of UC patients between the diagnostic age older or younger than 40 years. However, there were no significant difference between two age groups (Table 4).

Conclusion: ABO blood groups were not associated with the prevalence of UC, although UC patients with blood type A had the higher prevalence in our current study compared with the general populations with blood type A. UC patients with blood type O had higher baseline ESR level. UC patients with blood type A had higher baseline hemoglobin level.

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Prevalence and incidence rates of inflammatory bowel disease among First Nations: Population-based evidence from Saskatchewan, Canada

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Background: Worldwide, the epidemiology of inflammatory bowel disease (IBD) has been widely studied in the general population; however, there is limited-to-no evidence about IBD among Indigenous peoples, specifically among First Nations (FNs). Saskatchewan (SK) is a province in western Canada with a population of 1.1 million, 11% of whom are FNs. We aimed to estimate the prevalence, incidence, and trends of IBD among FNs in SK since 1999.

Methods: As part of a patient-oriented research project, we conducted a retrospective population-based study between 1999 and

2016 fiscal years using administrative data for the province of SK. A previously validated algorithm that required multiple health care contacts was applied to identify IBD cases (Crohn's disease [CD] and ulcerative colitis [UC]). The 'self-declared FN status' variable in the Person Health Registration System was used to determine FNs meeting the IBD case definition and the population at risk. Generalised linear models (GLMs) with generalised estimated equations and a negative binomial distribution were used to estimate the annual prevalence of IBD, CD, and UC. Incidence rates and their corresponding 95% confidence intervals (95%CI) were estimated using GLMs with a negative binomial distribution. The GLMs were used to test trends overtime.

Results: The annual prevalence of IBD among FNs in SK increased from 64 (95%CI 62–66) per 100,000 people in 1999 to 142 (95%CI 140–144) per 100,000 population in 2016. Also, the prevalence of CD and UC increased during the study period, with 53/100,000 (95%CI 52–55) for CD and 87/100,000 (95%CI 86–89) for UC in 2016. The average increase in the prevalence of IBD was 4.2% (95%CI 3.2–5.2) per year, with similar trends observed in CD (4.1% [95%CI 3.3–4.9]) and UC (3.4% [95%CI 2.3–4.6]). The incidence rates of IBD among FNs were 11 (95%CI 5–25) per 100,000 people in 1999 and 3 (95%CI 1–11) per 100,000 population in 2016. No statistically significant changes were observed in the incidence rates over time ($p = 0.09$).

Conclusion: This study is the first epidemiological work providing detailed evidence of IBD among FNs. We identified that FNs have increasing trends in the prevalence of IBD, which has also been described in the Canadian general population. In contrast to the general population of Canada and other developed countries that have shown decreasing trends, the incidence rates of IBD among FNs appear to be stable over time. Also, among FNs, UC appears to be more prevalent than CD; this pattern has been observed in the general populations of developing countries. These results illuminate the need to advocate for better health care and wellness for FNs living with IBD.

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Long-term prognosis of Crohn's disease and its temporal changes between 1986 and 2015 in a population-based cohort in the Songpa-Kangdong district of Seoul, Korea

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Background: No previous population-based study has evaluated the natural course of Crohn's disease (CD) over three decades in non-Caucasians. We previously reported a 30-year trend in the epidemiology of inflammatory bowel disease (IBD) in the Songpa-Kangdong (SK) District of Seoul, Korea between 1986 and 2015 (1). In this study, we aimed to analyse the long-term natural course of Korean patients with CD in the SK-IBD population-based cohort.

Methods: All patients newly diagnosed with CD between 1986 and 2015 were enrolled in this study. To assess the temporal trends in treatment paradigms and in the prognosis of CD, patients were divided into two cohorts according to the year of CD diagnosis: cohort 1, 1986–2003 and cohort 2, 2004–2015 (the anti-tumour necrosis factor [anti-TNF] era). Disease characteristics at diagnosis, outcomes and their predictors were evaluated.

Results: A total of 418 patients were enrolled. There were 318 males (76.1%) and median age at CD diagnosis was 22 years (interquartile range [IQR], 18–29). Disease location at CD diagnosis was ileal in 104 patients (24.9%), colonic in 39 (9.3%), and ileocolonic in 275 (65.8%). Disease behaviour at CD diagnosis was inflammatory in 339 patients (81.1%), stricturing in 34 (8.1%), and penetrating in 45 (10.8%). Perianal fistula/abscess was present in 43.3% (n = 181) before or at CD diagnosis. During the median follow-up of 108.1 months, the overall use of systemic corticosteroids, thiopurines, and anti-TNF agents was 57.4%, 80.9%, and 34.2%, respectively. Compared with the cohort 1, the cumulative probability of commencing corticosteroids decreased ($p = 0.001$), whereas that of commencing thiopurines and anti-TNF agents increased (both p < 0.001) in the cohort 2. A total of 113 patients (27.0%) underwent intestinal resection, demonstrating cumulative risks of intestinal resection at 1, 5, 10, 20, and 25 years after diagnosis of 12.5%, 16.5%, 25.6%, 49.7%, and 55.5%, respectively. Multivariate Cox regression analysis revealed that stricturing behaviour at diagnosis (hazard ratio [HR] 2.393, 95% confidence interval [CI] 1.234–4.641), penetrating behaviour at diagnosis (HR 4.514, 95% CI 1.752–11.629), and the cohort 2 (HR 0.530, 95% CI 0.297–0.945) were independent predictors of intestinal resection. The standardised mortality ratio was 1.867 (95% confidence interval, 0.502–4.780).

Conclusion: Korean patients showed a similar clinical course and intestinal resection rate compared with Western patients. The risk of intestinal resection has decreased in the anti-TNF era.

Reference

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