



## Editorial

## Clinical presentations of inflammatory bowel disease: East meets West

Inflammatory bowel disease (IBD), including ulcerative colitis (UC) and Crohn's disease (CD), is a chronic condition related to an intestinal mucosal immune response to antigenic stimulation. Decades ago, IBD was a rare disease in Asia. However, several recent population-based studies have shown a rising trend in the prevalence of IBD in Asia.<sup>1–3</sup> It has been suggested that a Westernized diet and environment, as well as lifestyle, may be primary causative factors of the upward increment of IBD frequency in Asia. Also, differences in clinical pictures are noted in IBD between Eastern and Western patient populations. First of all, genetic mutations of IBD in Asians differ from mutations in Caucasians. For example, major nucleotide oligomerization domain (NOD)2, interleukin (IL)-23 allele, and autophagy genetic variants commonly identified in Caucasian IBD patients were not detected in an Asian population.<sup>4</sup> Furthermore, IBD patients in Asia seem to have less familial clustering, milder disease manifestation, lower rates of surgery, and lower rates of UC-related colorectal cancer compared with the West.<sup>5</sup>

In Taiwan, research regarding IBD is scant, which might be attributable to a previously low IBD incidence. Similar to other countries in Asia, recent population studies from Taiwan have already indicated an increasing trend in the incidence of UC and CD.<sup>3,6</sup> This observation may suggest a potentially increasing burden of IBD on Taiwan's healthcare system, and local physicians should increase their familiarity with IBD.

The study by Hsu et al<sup>7</sup> in this issue of the *Journal of the Chinese Medical Association* compares the clinical data in UC and CD from medical data extracted from the National Health Insurance Research Database for the years 1998 to 2011. The authors reconfirmed an increasing trend of IBD incidence in Taiwan,<sup>3,6</sup> which showed an approximate doubling from 1998 to 2011. Despite the increasing trend, the increment of IBD in Taiwan seemed to be slower when compared with that of other Asian countries. For example, in Korea, a large prospective population-based epidemiological study showed at least a 10-fold increase in the incidence of UC and CD in 2 decades, which increased from 0.34/100,000 persons and 0.05/100,000 persons, respectively, from 1986 to 1990, to 3.08/100,000 persons and 1.34/100,000 persons, from 2001 to 2005.<sup>8</sup> In Japan, the incidence of UC and CD also increased from 0.08/

100,000 persons and 0.01/100,000 persons in 1965, to 1.95/100,000 persons and 0.51/100,000 persons in 1991 (a 20-fold to 50-fold increase).<sup>2,9</sup> There may exist some genetic, environmental, or even gut microbiota factors responsible for the slower increasing trend in IBD incidence in Taiwan, which may deserve further evaluation.

The current study also found that the prevalences of colon polyps and colorectal cancer (CRC) in UC patients in Taiwan were lower than those from Western countries (polyp: 6.3% vs. 14%; CRC: 0.39% vs. 3–5%).<sup>10</sup> The authors suggest that use of 5-aminosalicylic acid in UC treatment may prevent the formation of adenomas.<sup>7</sup> Other possible mechanisms may also contribute to the observed phenomenon. Shorter durations of follow-up of UC patients in the current study and less severe disease activities compared with those from Western countries may also contribute to a relatively lower prevalence in colon polyps and CRC among UC patients. With the potential increasing number of UC cases and increased duration of IBD follow-up in Taiwan, it is probable that the prevalence of UC-related polyps and CRC will also increase. This speculation emphasizes the importance of colonoscopic surveillance with biopsy among UC patients.

The current study reported an overall prevalence of extraintestinal manifestations (EIMs) of 11.9% among the IBD patients in Taiwan. The prevalence was similar to that reported in East Asia (6–19%), which is significantly lower compared to 25–40% in Western countries.<sup>11</sup> Similar to the reports from other Asian countries, joint manifestations are the most commonly reported EIM in Taiwan, and primary sclerosing cholangitis is also uncommon in the current study.<sup>12</sup> EIM of IBD can be more incapacitating than the intestinal disease itself, significantly impairing the quality of life in IBD patients. Actually, nearly every single organ can be affected by EIM of IBD, and early recognition and adequate treatment is necessary to prevent severe morbidity and mortality in affected IBD patients.<sup>13</sup> The reason behind the low EIM in the IBD patients in Taiwan or other Asian countries is unclear. Again, genetic or environmental factors may play a role in the low EIM prevalence in IBD patients in Taiwan. However, under-recognition of this condition may be another potential factor for the phenomenon. It is necessary

<http://dx.doi.org/10.1016/j.jcma.2016.09.005>

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Please cite this article in press as: Lu C-L, Clinical presentations of inflammatory bowel disease: East meets West, *Journal of the Chinese Medical Association* (2016), <http://dx.doi.org/10.1016/j.jcma.2016.09.005>

to assess IBD patients on a regular basis for purposes of prevention and/or specific further treatment, which can have a major benefit on patients' quality of life.

In our case, the current study is valuable to demonstrate the burgeoning trend and clinical manifestations of UC and CD in Taiwan. Nevertheless, there still remains necessary research that focuses on IBD in Taiwan or Asia. First of all, we need to closely follow-up and define the IBD burden in Taiwan/Asia so that we can notify healthcare providers regarding the impact of issuance and allocation of resources in the disease management. We also need to identify the potential causes of IBD, and find the proper way to prevent its progression. Furthermore, we need to establish the standard of care for IBD patients in Taiwan/Asia. As noted above, the clinical manifestations in IBD patients present differently in Taiwanese/Asian populations, and available clinical resources also differ in Asia when compared to Western countries. Therefore, we cannot incorporate all treatment guidelines from our counterpart Western countries without modification. We therefore need to set up a practical guideline for local use. However, we believe further research should be undertaken in this rapidly evolving field, which can ultimately lead to proper care and management of our potentially rising IBD patient population, not only in Taiwan, but also in Asia.

### Conflicts of interest

The author declares that he has no conflicts of interest related to the subject matter or materials discussed in this article.

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