TRFLP analysis of Mucosa-associated Microbiota of Ulcerative colitis patient in southwest China

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Background Recently evidence show an imbalance of gut microbiota has been play an important role in the pathogenesis of Ulcerative colitis (UC).terminal restriction fragment length polymorphism (T-RFLP) were used To investigate the differences of intestinal microbiota between UC patients and healthy controls in southwest China

Methods the involved subject were grouped into 3 subgroup. 29 in active UC group (A-UC), 21 in non-active UC group (NA-UC) and 23 in healthy controls group. Mucosa-associated microbiota was compared between healthy controls and UC patients using T-RFLP analysis.

Results Cluster analysis show a clear distinction between UC patient group and healthy control group, and subject in the same sub-group show significant similarity than people in different sub-group. Cluster analysis also show patient in UC group with the near or same Baron index score can be grouped into same sub-cluter；Compared to health controls group, Richness and Shannon-Wiener index increase in NA-UC, but decrease in A-UC；Compare to active UC patients, Both Shannon-Wiener index and Richness increase in the NA-UC. With MspI enzyme,Comparing to healthy control group, the unique dominate terminal-restriction fragment in UC group were 214bp, 221bp, 281bp；37bp and 96bp, 281bp were unique dominate terminal-refragement in NA-UC and A-UC respectively. Referring to the MiCA database, the dominaint bacteria in healthy controls group were composed by phylam firmicute, phylam bacteroides, phylam proteobacterium and uncultured bacteria; in UC group by phylam firmicute, phylam bacteroides,phylam actinobacterium,phylam acidobacterium,phylam proteobacterium. Compare to NA-UC, bacteria such as bacteroides sp.,uncultured lactobacillus sp.,uncultured actinobacterium,uncultured alpha proteobacterium reduced and phylam bacteroides were the most obvious; phylam firmicute such as uncultured firmicutes bacterium,clostridium sp. and uncultured beta proteobacterium,uncultured bacterium increased.

Conclusions intestinal microbiota of UC patient were significant different from healthy controls. Biodiversity reduced in A-UC and increased in NA-UC.Bacterial dysbiosis may play an important role in the pathogenesis of UC

Prevalence of Past or Current Hepatitis B Infection and Factors for Non-vaccination in Chinese Patients with Inflammatory Bowel Diseases

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Information on the prevalence and natural history of chronic hepatitis B (HBV) among Asian IBD patients are scarce. Moreover, the prevalence of HBV vaccination coverage in Asian IBD patients remains unknown.

Aim: We determined the prevalence and clinical course of current and past HBV infection among Chinese IBD patients. We also determined the proportion of Chinese IBD patients without protective antibody against HBV and factors associated with non-vaccination.

Methods: All patients attending our IBD Clinic had blood tests for viral hepatitis B markers. The prevalence of current and past infection with HBV, and effective HBV vaccination were determined. We also identified for risk factors associated with non-vaccination.

Results: A total of 267 Chinese IBD (166 ulcerative colitis and 101 Crohn's disease) patients were studied. The mean follow up was 10.5 years. Current HBV infection was detected in 6.7% patients whereas 28.5% had evidence of past HBV infection. One hundred and two (38.2%) patients had no detectable anti-HBs antibodies. Multivariate analysis found that young age of diagnosis (OR 1.021; 95% CI 1.00 – 1.04) and the use of thiopurines (OR 0.51; 95%CI 0.29 – 0.91) were associated with absence of anti-HBs. Deranged liver function was detected in 27 (10.1%) IBD patients including three (16.7%) HBsAg-positive patients. The corresponding proportion of patients with liver derangement was 7.9% in patients with past HBV infection, 8.9% in HBsAg-negative patients without anti-HBs and 11.2% in patients with effective HBV vaccination (P = 0.71).

Conclusion: Current and past infection with HBV was detected in about one-third of Chinese IBD patients. Approximately 40% of IBD patients lacked protective antibody against HBV. The use of thiopurines and young age of diagnosis was associated with non-vaccination among Chinese IBD patients. A more intensive HBV vaccination program with regular monitoring of anti-HBs may be needed in this group of patients.