Letters to the Editors

Benefit of Helicobacter pylori eradication therapy in all systemic sclerosis patients regardless of clinical symptoms

Sirs,

We read with great interest the review article by Yonk *et al*. regarding Helicobacter pylori (H. pylori) infection in systemic sclerosis (SSc) (1). We have recently evaluated the prevalence of H. pylori infection in a population of SSc without dyspeptic symptoms, in order to determine whether there is a possible link between the bacterium and disease severity in these patients (2). The aim of the study was to investigate a possible association between H. pylori infection with clinical manifestations and severity score. Our data suggest that H. pylori infection correlates with severity of skin, gastrointestinal, and joint/tendon involvement in SSc patients even without dyspeptic symptoms. H. pylori-positive SSc patients had a higher severity and activity score compared to H. pylori-negative. Therefore, H. pylori infection may play a role in the pathogenesis of SSc and also can provide some prognostic information.

A previous study from our group has shown that in SSc patients, H. pylori infection correlates with SSc activity and skin involvement (3). Our preliminary results suggest that the H. pylori infection is implicated in the activity of SSc, especially in skin involvement. These studies confirmed a correlation between H. pylori infection status and severity of skin involvement, however, no correlation between H. pylori infection and peripheral vascular involvement was found. Although H. pylori-positive SSc patients without dyspeptic symptoms had more severe heart and lung involvement than H. pylori negative SSc patients, the difference was not statistically significant. Contrarily to previous studies, we took into consideration not only demographic features, autoantibody profile and SSc subset, but also clinical characteristics using the Medsger scale and activity score in relation to H. pylori infection status. We found that skin, gastrointestinal, joint/tendon involvement were highly variable between SSc patients with or without H. pylori infection.

In regards to gastrointestinal symptoms associated with H. pylori seropositivity, heartburn was more common in H. pylori seropositive than seronegative SSc patients. According to current studies, the conclusion made by Yonk *et al*. is that despite the fact that the prevalence of heartburn was similar to healthy controls, H. pylori infection may be the cause of heartburn, and screening of H. pylori infection is needed if SSc patients ever develop heartburn. Our studies suggest that H. pylori screening should be performed in all SSc patients.

We assume that the eradication of H. pylori may induce improvement of activity and skin involvement in SSc patients. The beneficial effect of antimicrobial agents in SSc is well known (4). For example, antibiotic treatment for suspected small intestinal bacterial overgrowth has beneficial effects in SSc patients (5). As Yonk et al. point out, previous H. plyori infection may provoke abnormal immunological cascade in the pathogenesis of SSc. Therefore, H. pylori eradication might have beneficial effect in SSc patients with or without dyspeptic symptoms.

In H. pylori-positive SSc patients, randomised controlled studies evaluating the effect H. pylori eradication are not be possible due to ethical reasons. There are various mechanisms by which an infecting agent like H. pylori may induce autoimmunity, including molecular mimicry, polyclonal activation, epitope spread, bystander activation and superantigens. This hypothesis could be confirmed by the fact that that many SSc-like symptoms are provoked by infectious agents in healthy subjects.

In a disease as varied, complex, and rare as SSc, infection prevalence alone should not be expected to provide sufficient evidence for or against a pathologic role in the disease. Alternatively, eradication and prevention of putative infectious triggers of SSc with drug prophylaxis may provide an answer in the long term. However, careful evaluation of H. pylori infection and eradication therapy could be beneficial for SSc patients.

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