LETTERS

Comment on *Helicobacter pylori* seroprevalence and the occurrence and severity of psoriasis*

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Dear Editor,

Psoriasis is a chronic, inflammatory disease that affects the skin and joints. It has a prevalence of 2-3% of the world's population.[1] It has a multifactorial etiology with genetic and environmental factors leading to immunological dysfunction and characteristic inflammation.[1]

Helicobacter pylori (*H. pylori*) is a gram-negative, microaerophilic, spiral shaped, mobile bacterium with worldwide diffusion. Although it is well known that *H. pylori* is the main cause of peptic ulcer, an association between this infection and several extragastric manifestations has been reported in the latest two decades, which include cardiovascular, liver, skin, rheumatologic diseases, and blood disorders.

In a recent interesting prospective study, Mesquita *et al.* found a higher seroprevalence of *H. pylori* infection in psoriatic patients (72.1%) than in controls (33.3%) (P=0.002).[2] Furthermore, they found a higher seroprevalence among patients with severe psoriasis (79%) compared with those with moderate (69.5%) or mild (46.2%) disease (P=0.045). Both cases and controls did not suffer from gastrointestinal symptoms and had a similar socioeconomic level.

These results are in contrast with those of two studies in which *H. pylori* infection was searched with a method able to detect the active infection and not the potential contact during life. Fabrizi *et al.*, who used the urea breath test (UBT), concluded that there is a low prevalence of *H. pylori* infection in psoriatic children and adolescents, a similar result found in children without skin diseases.[3] Onsun *et al.*, using the stool test, found a prevalence of *H. pylori* infection of 61.3% in patients with psoriasis *versus* 59.3% in the control group (P>0.05).[4]

To explain these different results, it is crucial to analyze the potential selection biases. In particular, a wide and well-characterized control group is a key step in planning and conducting a study. The control group is used to compare the history of exposure in the cases with that in individuals who are free of the study disease. Individuals selected as controls should not only be free of the study disease, but also be similar to the cases concerning past potential for exposure.

In the study of Mesquita *et al.*, the sample size of the control group was small (21 patients).[2] Furthermore, the method used to detect *H. pylori* infection could have led to misinterpreted data. UBT and stool test are direct tests with higher accuracy than serology to diagnose the presence of the bacterium. Serum positivity for *H. pylori* antigens is a marker of exposure and not necessarily of "true infection", revealing some drawbacks. The most important signal is its marked variability in accuracy with the possible interpretation of positivity as consequence of active infection as well as of previous bacterial exposure.[5]

For these reasons, only validated serological kits to test for active *H. pylori* infections should be used and a wider control group should be considered by future studies to confirm our findings. ❑

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