Annals of Gastroenterology (2020) **33,** 1

National consensus on *Helicobacter pylori* infection: the next-day challenge

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The Hellenic Society of Gastroenterology [1] recently published the National consensus on *Helicobacter pylori* (*H. pylori*) infection, following the necessity of a uniform approach to yield optimal eradication rates. As implied by the recent Maastricht V/Florence consensus [2], an "add-on" strategy regarding antibiotics was adapted to overleap the increasing antibiotic resistance, combined with the absence of bismuth-containing drugs, thus perpetuating a "vicious circle" and emerging novel approaches in treatment models with a targeted pathophysiological perspective. Importantly, parameters connected with the multidrug resistance include the formation of *H. pylori*-related biofilms, suggesting the introduction of novel anti-biofilm therapeutic approaches using anti-biofilm agents [3].

A homophonous suggestion (Statement 10) proposed that *H. pylori* culture or molecular techniques should be conducted to evaluate the antimicrobial susceptibility. Nevertheless, those methods are characterized by limited availability in most regions. On the other hand, recent data imply a potential benefit of vitamin D (vitD) for *H. pylori* infection treatment, related to the vitD-receptor's (VDR) antimicrobial role [4-6]. VDR, stimulated by the active *H. pylori* infection, induces human β-defensins, which in high concentrations suppress *H. pylori* biofilm activity [3]; subtle or strong activation of VDR, due to vitD absence or adequacy, could contribute or not to *H. pylori* acclimatization, morbidity, resistance, and survival [3]. Additionally, vitD seems to act directly as an antibacterial agent through stimulation of defensins and cathelicidins, and vitD upregulated protein 1 (VDP1). possesses an *H. pylori*-specific antimicrobial ability, indicating a promising therapeutic potential [7,8]. Moreover, studies in mouse models revealed a protective role of a VDP1 against *H. pylori*-related gastric cancer [9]. Clinical studies concluded that vitD had a protective role against *H. pylori* infection and suggested its deficiency as a distinct risk factor in the failure of eradication treatment, while a recent meta-analysis concluded that vitD supplementation could change the effectiveness of eradication regimens [10]. Therefore, a National multicenter study has recently been inaugurated to elucidate the relationship between vitD and *H. pylori* infection and the potential beneficial effect of vitD supplementation during eradication treatment.

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Conflict of Interest: None

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Received 20 January 2020; accepted 5 February 2020; published online 27 March 2020

DOI: https://doi.org/10.20524/aog.2020.0469