Correspondence

Wiser than we thought: *Helicobacter pylori*

To the Editor

We read with great interest the paper by Malshe [1] on the treatment of *Helicobacter pylori* (*H. pylori*) infection by drinking air and manoeuvring it to the pyloric region of the stomach. The idea proposed by the author in theory sounds interesting and impressive, but the hypothesis, which is based on the major idea that "*H. pylori* does not colonize in the fundal region", unfortunately does not reflect the current state of knowledge. As a consequence, the proposed hypothesis that treatment of *H. pylori* infection by swallowing air brings us to a dead end because of the author's inconclusive initial observation.

*H. pylori* is a microaerophilic, neutralophilic, Gram-negative spiral bacterial organism that is able to colonize the stomach but does not survive in a defined medium with a pH lower than 4.0, unless urea is present [2]. Infection is usually acquired in childhood but clinical manifestations typically occur in adults. *H. pylori* is tropic for the gastric epithelium (i.e., the stomach and areas of the gastric metaplasia outside the stomach) and is found either attached to the surface epithelium or within the mucus coating the surface [3]. Although local acid production is the major determinant of colonization of *H. pylori*, it has a predilection for antral colonization because of the relatively lower acid production in the antrum [4]. Despite the highly acidic environment in the corpus and fundus compared with the antrum, colonization with *H. pylori* is also likely in these areas. A detailed literature search also supports the fact that *H. pylori* can lead to acute and chronic infections in all parts of the stomach, including the fundal region [5,6]. Treatment with a proton pump inhibitor, which leads to a decrease in gastric acidity, changes the colonization patterns in favor of fundal dominance, supporting the acid based theory [7].

As depicted also by the author, *H. pylori* is a microaerophilic organism (not exactly an anaerobic organism). Microaerophilic organisms are a specific type of microorganism that requires oxygen to survive, but require environments containing lower levels of oxygen than are present in the atmosphere. From this point of view, it is hard to accept that *H. pylori* survival is strictly related to an unoxgenated medium. Even if we were to accept this, treatment of an anaerobic bacterial infection with air is another matter of debate and beyond the scope of this letter, which needs evidence based practices.

In conclusion, fundal air does not affect bacterial colonization and it is obvious that the decreased rate of *H. pylori* colonization in the fundal region of the stomach is due to acidic factors.

References


and health status [4]. Deficiency of TT promoted arrhythmia in rat atria by mechanisms which induce calcium leakage from the sarcoplasmic reticulum helping to explain the increase in AF in association with low TT, particularly in elderly men [5]. Circulating TT levels in men have a diurnal variation, usually reaching a mean maximum level of 710 ng/dl at approximately 6 AM and declining gradually to a mean minimum level of 426 ng/dl at approximately 10 PM, averaging about 610 ng/dl in mid-day and afternoon [6].

Stroke is a major disabling and sometimes lethal complication of AF, with ischemic strokes occurring 2-7 times more frequently in AF than in the general population [7]. Low testosterone is an independent risk factor for acute ischemic stroke, stroke severity and related death in men considering age, blood pressure, diabetes, ischemic heart disease, smoking and atrial fibrillation [8]. Low testosterone is also associated with coronary artery disease and with myocardial infarction in men [9], and all-cause mortality independent of numerous risk factors in men [10]. Beta-blockers, commonly used rate drugs in cardiology, lower testosterone in men [11], apparently increasing the risk of AF and stroke.

An elderly (69-year old) paroxysmal/lone AF subject often experienced normal sinus rhythm (NSR) early in the morning at the same time of day when TT is highest. Considering the literature and his experience, I hypothesized that low testosterone was the cause of his AF, and that increasing TT would terminate AF. I tested my hypothesis in this man and a 59-year old man.

The elderly subject had an initial serum TT level of 351 ng/dl. He received natural testosterone (20 mg in AM and 20 mg in PM) as a 1% aqueous, sublingual/buccal liquid, slowly swallowed over a 30-60 min period. He had AF daily for 1 year prior to TT treatment. He was also taking warfarin, a beta-blocker (metoprol ER) as a 250mg-1.5g weekly) and stanozolol (50-200 mg weekly), both Illicitly obtained anabolic steroids as testosterone ethanate via intramuscular injections over a 12-week duration caused rapid, highly symptomatic AF in a young male athlete/body builder [12], and similarly, 200 mg of testosterone cypionate, 200 mg of extrabolin decanoate, and 120 mg of stanozolol 2 days per week for 5 weeks caused the same adverse symptoms in another young athlete/body builder [13].

Since both lower and higher than normal TT concentrations are associated with AF, blood levels of TT should not be elevated much in excess of the normal physiologic range in the treatment of AF.

These two cases are the first reports of TT treatment for AF and stroke prevention in men. These observations suggest the possibility of a safer and more effective natural rhythm treatment for AF and stroke prevention. Since TT blood levels of the two young athlete/body builders were not reported, I hypothesize that their levels were considerably higher than the 1489 ng/dl reported for my elderly AF-free subject. Large scale clinical trials to establish the extent of efficacy and safety are strongly recommended.

References


Let's try erythropoietin in Alzheimer's disease

Dear editor

Erythropoietin (EPO), the stimulator of red blood cell synthesis, is shown to be effective in neuroprotection and was used for sev-