

Visit-to-visit variability in low-density lipoprotein cholesterol

To the Editor,

We read the published article "Visit-to-visit variability in low-density lipoprotein cholesterol is associated with adverse events in non-obstructive coronary artery disease. *Anatol J Cardiol* 2019; 22: 117-24" with great interest (1). Gu et al. (1) concluded that "Among the patients with non-obstructive CAD, a higher visit-to-visit LDL-C variability is associated with increasing all-cause mortality or composite endpoints during the long-term follow-up". We would like to share our ideas on this report. An important consideration is the quality control principle in LDL-C determination in laboratory medicine. For any clinical profile test in laboratory, variability in test results can naturally occur. The clinical laboratory has to control for with-in day and between-day variation, which is related to daily environmental conditions (2). The variation is not related to any pathophysiological process in the patient but to the analytic factors in the laboratory. LDL-C determination by different types of analysis in the same laboratory can simply result in variation of LDL-C results. Thus, Gu et al. (1) have to control for the described factors. LDL-C determination has to be performed using the same technique and analyzer. Different LDL-C assays can have different diagnostic properties and result in possible misinterpretation of results (3).

Nevertheless, with the described control, the between-day variation can still occur.

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Author's Reply

To the Editor,

Thanks for your interest in our manuscript (1).

As stated in the letter, different LDL-C analysis methods or environmental conditions might result in LDL-C variability. To control for the described factors, the LDL-C levels of our enrolled patients were all determined by homogeneous assays. Besides, we conducted daily testing and quality control, such as reducing the LDL-C testing variation coefficient (CV) to less than 4%, deviation to less than $\pm 4\%$, and total error (deviation +1.96 CV) to less than 12%.

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Effects of colchicine on cardiac functions

To the Editor,

We have read with great interest the article published by Hidayet et al. (1), which was regarding the effects of Behçet's disease (BD) on cardiac repolarization. It is emphasized in the study that Tp-e interval and Tp-e/QT and Tp-e/QTc ratios were

prolonged in patients with BD compared with those in healthy controls, and it was demonstrated that the Tp-e/QTc ratio was correlated with the disease duration (1).

Oral aphthous ulcer and skin lesions including acneiform lesions, papulopustular lesions, and erythema nodosum are characteristic manifestations of BD. Colchicine inhibits microtubule function and decreases inflammation by impairing neutrophil chemotaxis (2). Colchicine is used in mucocutaneous manifestations of BD. It is especially effective for the treatment of oral ulcers and erythema nodosum (3). Colchicine shows some beneficial and unfavorable effects on cardiac functions. It is used in the treatment of pericarditis, and colchicine treatment is associated with significantly less recurrence following atrial fibrillation ablation (4). Frommeyer et al. (5) showed in rabbits that although colchicine had no effects on the QT interval and dispersion, effective refractory period was decreased dose dependently following colchicine infusion, indicating the significantly elevated inducibility of ventricular fibrillation (5). It is underscored in another study that colchicine treatment distinctly decreased the Tp-e and Tp-e/QT values by the end of a 1-year treatment in patients with familial Mediterranean fever (6).

In conclusion, colchicine is a mainstay of treatment in BD and has several effects on cardiac functions. In the current study, there is not any statement about the effects of colchicine on cardiac repolarization. We think that it would have been better if the comparison of ECG findings between patients with and without colchicine treatment was performed.

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Author's Reply

To the Editor,

We thank the authors for their valuable evaluation of our article entitled "Evaluation of Tp-e interval, Tp-e/QT ratio, and Tp-e/QTc ratio in patients with Behçet's disease. *Anatol J Cardiol* 2019; 22: 85-90" (1).

Colchicine has been used for treating various cardiac diseases such as pericarditis and postablation atrial fibrillation. As indicated by the authors, various studies have shown that colchicine may affect cardiac functions (2). Frommeyer et al. (3) showed that colchicine had no effects on the QT interval and dispersion, whereas Ocal et al. (4) reported lower Tp-e and Tp-e/QT values in patients with familial Mediterranean fever who were treated with colchicine for 1-year. As mentioned by the authors, 57% of the patients with Behçet's disease received colchicine treatment. Naturally, ECG parameters may be affected in patients with Behçet's disease using colchicine. Therefore, we reviewed the data and performed subgroup analysis. We observed that Tp-e, cTp-e, Tp-e/QT, Tp-e/cQT, and QTd parameters were not statistically significant between the groups with or without colchicine treatment ($p>0.05$ for all). Since our study is not a follow-up study, it is not possible to compare ECG parameters before and after colchicine treatment. It is worth to re-evaluate with a different study design. In future large-scale studies, the effects of colchicine on ECG parameters in patients with Behçet's disease can be shown more clearly.

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