

MEN1-Related Hyperparathyroidism: Response to Cinacalcet and Calcium-Sensing Receptor Gene Variant Arg990Gly

Sir,

Calcium biometabolism is usually an aberrant in abnormal parathyroid neoplasm. How blood calcium level is controlled in such cases is very interesting. The calcium-sensing receptor (CASR) plays an important role in this regard, and its polymorphism is widely studied.^[1] The interrelationship between parathyroid malignancy, blood calcium, and underlying CASR polymorphism is very interesting. Whether different CASR polymorphisms have an effect on the drug treatment of the neoplasm is an important question that needs to be addressed.

An important parathyroid neoplasm with aberration of blood calcium is type 1 multiple endocrine neoplasia (MEN1). MEN1 on is usually related to primary hyperparathyroidism and has a high postsurgery recurrence rate.^[2] In a recent study, Filopanti *et al.* reported the response to cinacalcet and its relationship with the CASR gene variant Arg990Gly.^[3] Filopanti *et al.* mentioned no significant effect of such a polymorphism.^[3] Here, the authors perform reappraisal on the effect of CASR Arg990Gly based on the quantum medicine assessment on molecular change in the polymorphism using the same technique as presented in previous publications.^[4-6] It can be seen that Arg990Gly has a lower protein molecular weight than naïve type (the magnitude of decrease molecular mass per molecule is equal to 56.9%). The lower molecular mass means lower final bioaction product. This implies that MEN1 with CASR Arg990Gly should have a lower blood calcium level. If MEN1 with CASR Arg990Gly is responsive to the same dose of cinacalcet, it is likely to result in a less minimizing of blood calcium level. Of interest, this finding is concordant with the report by Filopanti *et al.*^[3]

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Conflicts of interest

There are no conflicts of interest.

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