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Letter to the editor

Can urinary titin be used for predicting Duchenne muscular dystrophy?

Dear Editor,

We have read the interesting paper entitled “Receiver operating curve analyses of urinary titin of healthy 3-year-old children may be a noninvasive screening method for Duchenne muscular dystrophy”, which was published recently in *Clinica Chimica Acta 486 (2018)* [1]. In this study, Matsuo et al. claimed that urinary titin concentration may be an excellent non-invasive biomarker to screen for Duchenne muscular dystrophy(DMD).

We applaud authors' attempt to find a non-invasive screening test for a rare genetic disorder. However, we would like to raise some questions for the authors.

First, why did authors decide to select the number of control that were 9 [2] and 100 [1],however, the number of DMD were 145 and 4, respectively? This study was not pre-designed exclusion and inclusion criteria for study cohort enrollment, and the diagnostic accuracy is significantly affected by the proportion of cases and controls [3].

Second, why didn't authors give to the optimal thresholds for screening DMD?

Third, Two [1,2] AUC of urinary titin was 1.00 for predicting DMD, indicate that the levels of control and DMD isn't intersection. In fact, a previous published study by the same group of authors [2] indicates that urinary titin levels of 145 DMD patients was less than 10 pmol/mg Cr, the levels of 9 controls is less than 10 pmol/mg Cr, however, the control of this study is higher than 10 pmol/mg Cr. The diagnostic efficiency of two studies [1,2] is 100%, But these conclusions seem doubtful.

In summary, we suspect that authors may have intentionally chosen the number of control. And we know very well that different numbers of controls may have different diagnostic efficiencies [3]. The title of this study should be“Reference intervals of urinary titin for healthy 3-y-old children”.

References

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