

Letter to the Editor: Mean Platelet Volume may not be a Diagnostic Marker for Hepatocellular Carcinoma due to Chronic Hepatitis C Infection

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Dear Editor,

We read with a great interest the article of Omar et al. about mean platelet volume (MPV) and hepatocellular carcinoma (HCC) due to chronic hepatitis C (CHC) infection [1]. They found that MPV was sensitive and specific in diagnosis of HCC. We would like to comment on this study.

Notwithstanding that MPV is a platelet parameter of routine blood count; its measurement has not standardized [2]. The MPV is dependent on a number of variables including time of analysis after venipuncture, method of analysis, anticoagulant used and specimen storage temperature [2,3]. The MPV increases with EDTA depending on the measurement time after venipuncture. This increment generally occurs up to 30-45% within 2 hours exposure to EDTA [3]. Also, the various technologies for measuring the complete blood count cause to variable MPV results [2,4-6]. MPV variations up to 40% were noted with comparison of the different instruments. Beyan & Beyan performed a meta-analysis using the data of 181 studies containing a healthy control groups within 1181 studies about MPV indexed PubMed database [7]. The

MPV measurements varied up to 17.8% by the instruments and maximum deviations in MPV measurements by the MPV measurement times after venipuncture plus the instruments used varied up to 27.7% in this meta-analysis [7]. Because the instrument/s used in automated blood cell counting and the MPV measurement times after venipuncture were not specified in this study, the reliability and validity of the data were questionable.

On the other hand, it has been suggested that MPV varies according to age and sex [2]. In fact, some studies did not identify significant differences of MPV in men and women, while some others detected MPV higher in women or in men. Discordant results were also reported about the correlation with age [2]. There were statistically significant differences in terms of sex and gender between control group and HCC group in this study and probably, the differences of MPV values might be originated from sex- and age- mismatch groups.

As a result, MPV may not be a diagnostic marker for HCC due to CHC infection.

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