

Determination of the 99th percentile upper reference limit for high-sensitivity cardiac troponin I in Malaysian population

ABSTRACT

Introduction of high-sensitivity cardiac troponin I (hscTn I) assays for routine clinical use in Malaysia requires determination of the 99th percentile upper reference limit (URL) for each assay to suit local context. Hence, this study aimed to determine the 99th percentile URL for hscTn I in the Malaysian population. A total of 250 (120 males and 130 females) healthy Malaysian blood donors aged 18 to 60 years old were recruited. Blood samples for hscTn I were measured using Abbott Diagnostics hscTn I assay on Architect i2000sr analyser. The 99th percentile was calculated using a non-parametric method and gender specific results were compared. The 99th percentile URL for hscTn I for the overall population was 23.7 ng/L, with gender specific values being 29.9 ng/L and 18.6 ng/L for male and female, respectively. Females had significantly lower hscTn I compared to males. This study confirms the use of gender specific 99th percentile URL for hscTn I for clinical use in a multi-ethnic Malaysian population.

Keyword: High-sensitivity; Troponin I; 99th percentile; Malaysian; Gender