

Position Paper on Kawasaki Disease in India: Pertinent Issues

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We read with interest the recently published IAP position paper on Kawasaki disease (KD) [1]. We would like to highlight the following issues that require further consideration.

Under laboratory investigations, it is noted that serum levels of NT-pro-BNP (N-terminal pro-brain natriuretic peptide) >225 pg/mL can assist in the diagnosis of KD (86.5% sensitivity and 94.8% specificity to suggest myocardial dysfunction). However, in the subsequent section, authors mention that cut-off values for NT-Pro-BNP indicative of myocardial involvement are yet to be clearly defined. The AHA statement [2] also states that this biomarker may not have sufficient discriminative ability. It is notable that during childhood, NT-Pro-BNP is known to vary with age and therefore, it has been suggested that a single cut-off value based on ROC analysis would be inappropriate [3,4].

It is mentioned that it may take 36–48 hours for the fever to subside in IVIG-responsive patients [1]. However, both this position paper and the AHA statement define IVIG resistance as persistence or recurrence of fever 36 hours after the end of IVIG infusion. Several recent studies and the Japanese Society of Pediatric Cardiology and Cardiac Surgery guidelines suggest a 48-hour time frame for the same [5]. The 36-hour cut-off, when applied strictly, could potentially lead to over-diagnosis of IVIG resistance. This is a pertinent issue that needs further exploration, considering that the time taken for IVIG infusion itself can be variable (typically 12 hours in North America and 20–24 hours in Japan) [5]. AHA recommends IVIG infusion over 10–12 hours (as opposed to 12–24 hours recommended by the authors) [1,2].

There are certain variations in the definition of recurrence. Recurrent KD is defined as a repeat episode of KD after complete resolution of the first episode [1,2]. Acute illness in KD usually lasts for 4 to 6 weeks and several Japanese surveys have classified KD as recurrent if there is an interval of at least two months from the onset of the first illness to onset of the new episode [6].

In the paper, the available Indian data has not been critically evaluated. It is imperative to consider relevant local data to bring in the much needed Indian perspective. In the process, lack of good quality data on the disease epidemiology and the importance of a national registry could have been highlighted. Finally, a conflict of interest statement by the authors is missing.

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AUTHORS' REPLY

We are in agreement with the author that NT-pro-BNP is not a well established tool for the diagnosis of KD. As rightly pointed out, NT-pro-BNP varies with age and the values provided in the paper are from the study by Dahdah, et al. [1]. It must be said that one should refer to age related upper limits of normal and it is also useful to keep in mind to avoid making diagnosis of Kawasaki disease just on the basis of NT-pro-BNP alone. Though there has been a global effort to identify a suitable biomarker for KD diagnosis, but that still remains elusive. NT-pro-BNP is presently an accessible tool in many centers and the facts relating to this tool has been added as an addendum in the paper.

Regarding the 36 hours (post intravenous immunoglobulin infusion) being the cut-off for the diagnosis of IVIg resistance, it was more of an adaptation from the American Heart Association (AHA) guidelines [2]. It is important to keep in mind that this period is after the completion of IVIg infusion and the duration of the IVIg infusion (10–12 hours vs 12–24 hours) does not matter much. The longer infusion period would specially apply to the context of school-going children with the disease when a higher total dose of IVIg needs to be infused. It needs to be emphasized that in a disease like KD, it might be useful to