

Procalcitonin Estimation in Kawasaki Disease

Kawasaki disease (KD) is an inflammatory condition caused by the vasculitis of the medium sized arteries. The patient suffering from this disease runs high fever extending into weeks(1). Almost all of them receive antibiotics (oral/intravenous) in the assumption that the fever is of infective origin. The high erythrocyte sedimentation rate (ESR) and C-reactive protein (CRP) levels also contribute to this.

We have been looking for a marker that will help to say that, the fever is of an inflammatory origin (vasculitis) and not sepsis. This concept will relieve the KD patients from unnecessary use of antibiotics. We believe that procalcitonin (PCT) can be a useful marker in such a situation. PCT levels are extensively used in critical care medicine to establish or to exclude sepsis(2,3).

We hereby present 38 patients with KD admitted to our hospital in the last three and a half years. Diagnosis was done as per the standard guidelines(4). Their age ranged from four and half months to seven and half years. All of them underwent routine investigations including PCT. All the reports showed low PCT level (<0.5 ng/mL) suggesting absence of sepsis against a high ESR and CRP observed in all patients. So except for the PCT level, a clinician going through the other reports will

be inclined to think of an infection and prescribe antibiotics. Thus, estimation of PCT will help differentiate KD from a septic condition and avoid unnecessary use of antibiotics.

The PCT level can be done even after the patient has received antibiotics; the cost varies from Rs.1500 to 2000/-. The amount is negligible in comparison to the cost of the antibiotics used.

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REFERENCES

1. Singh S. Kawasaki disease: A clinical dilemma. *Indian Pediatr* 1999; 36: 871- 875.
2. Harbarth S, Holeckova K, Froidevaux C, Pittet D, Ricou B, Grau GE, *et al.* Diagnostic value of procalcitonin, interleukin-6, and interleukin-8 in critically ill patients admitted with suspected sepsis. *Am J Respir Crit Care Med* 2001; 164: 396-402.
3. Muller B, Becke KL, Schachinger H, Ricken Backer PR, Huber PR, Zimmerli W, *et al.* Calcitonin precursors are reliable markers of sepsis in medical intensive care unit. *Crit. Care Med* 2000; 28: 977- 983.
4. New burger JW, Takahashi M, Gerber MA, Gewitz MH, Tani LY, Burns JC, *et al.* Diagnosis, treatment and long-term management of Kawasaki disease. *Circulation* 2004; 110: 2747-2771.