Aspirin treatment and increased generation of cysteinyl leukotrienes in Kawasaki disease

EDITOR,—We read with great interest the recent article by Dr Mayatepek and Dr Lehmann in which they demonstrate that cysteinyl leukotrienes may be involved in the pathophysiology of Kawasaki disease and leukotriene synthetase inhibition or receptor antagonism may offer a new potential therapeu- tic approach.1 Aspirin combined with high intravenous doses of gammaglobulin are presently the most commonly used treatment for Kawasaki disease. Considering that non-steroidal anti-inflammatory drugs, including aspirin, can augment the 5-lipoxygenase pathway by blocking cyclo-oxygenase in some pathological conditions,2 3 administration of aspirin may contribute to an increase in leukotrienes generation in Kawasaki disease. The authors did not refer to the generation of cysteinyl leukotrienes during aspirin treatment, but examination of this may be necessary in assessing the safety of implementing aspirin treatment in Kawasaki disease.

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Dr Mayatepek comments:

In our study on the role of cysteinyl leukotrienes in Kawasaki disease we examined patients during the acute phase before any treatment. A possible effect of non-steroidal anti-inflammatory drugs, such as aspirin, on cysteinyl leukotriene generation in Kawasaki disease was not the subject of this article. However, it was well known that doses of up to 2-5 g of aspirin had no effect on urinary leukotriene E4 (LTE4) excretion.1 Furthermore, administration of other non-steroidal anti-inflammatory drugs, such as indomethacin, in daily doses of 50 mg also had no effect on the baseline and allergen stimulated LTE4 excretion.2 3 Performing the above mentioned study, we were able to measure urinary excretion of LTE4 in three of these patients with Kawasaki disease during aspirin and gam- maglobulin treatment and found no increase in leukotriene generation. It seems therefore unlikely that aspirin in the dosage used in Kawasaki disease did not increase generation of cysteinyl leukotrienes in vivo.