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 therapeutic 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 leukotriene A4 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 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 Performing the above mentioned study, we were able to measure urinary excretion of LTE4 in three of these patients with Kawasaki disease during gammaglobulin treatment and found no increase in leukotriene generation. It seems therefore unlikely that aspirin in the dosage used is responsible for an increase in cysteinyl leukotriene generation.


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Aspirin could be an important pathogen in Bangladeshi children? It would be very interesting to know if active efforts have been made to detect this newly described and seasonal pathogen in Bangladeshi children.

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Dr Alman comments:
The clinical trial of trimethoprim-sulphamethoxazole in the treatment of persistent diarrhoea in Bangladeshi children was not aimed to treat persistent diarrhoea associated with cyclospora infection. So, the high presence of cyclospora in the stool was not looked for carefully. The role of cyclospora in the pathogenesis of persistent diarrhoea in infants and children in Bangladesh has not been studied extensively. Recently, six cases of chronic diarrhoea associated with cyclospora infection were reported from Bangladesh.1 However, all the subjects in this report were above 2 years of age. Our subject studies were below 2 years of age. Thus, cyclospora as a causal agent of persistent diarrhoea in our subjects is uncertain. Nevertheless, the possibility of cyclospora infection in a few cases cannot be ruled out. Further studies are needed to confirm this belief.

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As cyclospora an important cause of diarrhoea in Bangladesh?

Editor,—Alam and colleagues have shown quite convincingly in their classical (double blind, randomised, placebo controlled) trial that co-trimoxazole is clinically beneficial in the treatment of Bangladeshi infants with persistent diarrhoea.1 This is an important finding as chronic diarrhoea may be responsible for a third of all deaths in rural Bangladeshi children under 5 years old.2 In the study of Alam et al initial stool cultures were negative for Enterotoxa histolytica/Giardia lambia. However, no mention is made of whether cyclospora was looked for or found. This parasite may cause chronic diarrhoea and is highly susceptible to treatment with co-trimoxazole.3 A modified acid-fast stain is required to detect the organism.

In a Nepali study where children with tachyphoea or respiratory distress (and presumed pneumonia) were managed by village based health workers who dispensed co-trimoxazole (presumed pneumonia) may occur at a probably relitive risk of death which was even greater in those children with diarrhoea, alone or in combination with pneumonia (36%; 95% confidence interval (CI) 23% to 48%), than in those with diarrhoea alone (30%; 95% CI 3% to 50%).4 It has already been suggested that in the Nepali study, the treatment of children with co-trimoxazole for tachyphoea (presumed pneumonia) may serendipitously also have treated those children with respiratory distress from metabolic acidosis secondary to chronic diarrhoea caused by cyclospora infection.

Could cyclospora be an important pathogen in Bangladeshi children? It would be very interesting to know if active efforts have been made to detect this newly described and seasonal pathogen in Bangladeshi children.

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