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RESEARCH LETTERS

Stevens-Jonhson syndrome after acetaminophen ingestion, confirmed by challenge test in an eleven-year-old patient

To the Editor:

Paracetamol (acetaminophen) is a widely used drug in paediatric population because of its analgesic and antipyretic properties. Cutaneous adverse reactions to standard dosages are quite rare considering the enormous consumption of this drug.[1] Isolated skin and systemic reactions such us anaphylaxis, vasculitis, hepatitis, rhabdomyolysis, etc. have been described during the last 25 years. Several cases of urticaria, maculopapular eruption, fixed drug eruption, angio-oedema and toxic epidermal necrolysis[2–4] have also been reported but only a few cases of erythema multiforme[5,6]-Stevens Johnson syndrome have been associated with acetaminophen ingestion and none confirmed by oral provocation test and biopsy. We report a paediatric patient who presented erythema multiforme-Stevens Johnson syndrome after paracetamol ingestion which was confirmed by a rechallenge test with this drug.

An 11-year-old boy, previously healthy, developed general malaise, fever and erythematous macules with target-like bulla in the centre, mainly on his left arm and right leg. A few hours later, erosive and haemorrhagic lesions appeared on the lip and spread to the oral and genital mucosa. The rest of the physical examination was normal. These findings were confirmed by a dermatologist who clinically diagnosed erythema multiforme-Stevens Johnson syndrome, and took a biopsy which was compatible with this disease. Three days before the onset of these symptoms the patient had started a treatment with paracetamol for a cold. He had tolerated paracetamol previously. Two years after this adverse reaction the patient was referred to our drug allergy unit. We asked his mother about the reaction characteristics and the possible culprit drug implicated in the problem. She told us, by mistake, that the patient was taking antalgin® (naproxen) the days before the event. Specific serum immunoglobulin E to naproxen and acetylsalicylic acid was negative. For skin testing (prick and intradermal test) we used ibuprofen (60–6 mg/ml), paracetamol (100–1 mg/ml), acetylsalicylic acid (250–0.25 mg/ml), naproxen (25 mg/ml) and magnesium dipyrone (400–4 mg/ml) diluted in saline solution. Immediate and delayed readings were all negative. Oral paracetamol was administered in progressively increasing doses, until reaching 500 mg. The challenge test was performed in a single-blind fashion. Forty-eight hours after paracetamol administration, the patient developed papules, vesicles (Figure 1) and scabs in face, arms, chest and legs. Erosive lesions also appeared in oral (Figure 2) and genital mucosa. The dermatologist diagnosed erythema multiforme and took a biopsy which was compatible with this disease. Lesions disappeared in two weeks. The patient tolerated therapeutic doses of dipyrone and acetylsalicylic acid after this reaction.

Erythema multiforme/ Stevens-Johnson syndrome secondary to paracetamol has rarely been reported in the paediatric population. We report the finding of an 11-year-old boy who developed a mucosal and skin reaction compatible with this disease after the ingestion of paracetamol while showing good tolerance to other non-steroidal anti-inflammatory drugs.

We would like to clarify that a rechallenge test with medication is contraindicated in Stevens-Johnson syndrome. We challenged our patient with acetaminophen because we did not know that it was the responsible drug.

The patient's mother told us, mistakenly, that the implicated drug was naproxen because antalgin® (naproxen) and termalgin® (paracetamol) sound similar in the Spanish language. We decided to challenge our patient with paracetamol because the first drug reported was naproxen and we wanted to confirm that the patient tolerated another analgesic drug. We interrogated her again, after

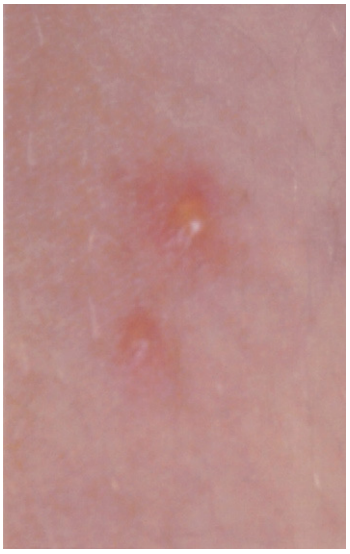

Figure 1 Papular-vesiculous lesions.

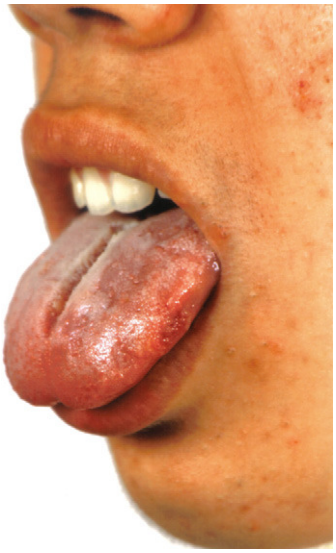

Figure 2 Detail of an erosive lesion on the tongue.

the positive oral provocation test, and we obtained the patient hospitalisation clinical history confirming that paracetamol was the responsible drug in the previous skin reaction. To our knowledge this is the first report of Stevens-Johnson syndrome after paracetamol ingestion confirmed by oral provocation test and biopsy. We also wish to stress the importance of a meticulous patient questioning after suffering this type of reactions and the difficulties associated to remembering the generic and trade names of the medicines due to the large number of brand names and their similar pronunciation.

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Bronchial asthma, sensitisation and exposure to Der p1 and Der f1 in an Andean Ecuadorian school

To the Editor:

House dust mites are important indoor allergens and are commonly related with asthma and allergic diseases, especially in children. Recently, domestic mite fauna in high altitude (2,500–2,800 m) cities of Ecuador have been studied and demonstrated a frequent and abundant presence of mites and their allergens in house dust samples collected.[1] Also, other studies had suggested that *D. pteronyssinus* and *D. farinae* are important sensitising agents in patients with allergic rhinoconjunctivitis and bronchial asthma in Quito.[2] Their significance is greater than that of pollens and other allergens.[3]

Quito, the capital of Ecuador, is a city located in the Andes Mountains, at 2,800 m above sea level. Its temperature ranges from 7 °C at night, to 26 °C during the day, averaging 15 °C , and its annual mean relative humidity is 75%. While children's greatest exposure to indoor allergens is in the home, other public places where children spend a large amount of time, such as schools, may also be sources of significant allergen encounters. Studies on the significance of environmental conditions and dust mites concentrations in the school environment are scarce in the world, and absent in Ecuador and many other Latin-American countries. Students spend a great deal of their time in the classroom, and aeroallergen exposure in the school environment could facilitate allergic sensitisation and subsequent development of asthma.

To determine asthma prevalence and characteristics, sensitisation and exposure levels to Der p 1 and Der f 1 in students of Quito, we researched an urban private elementary school with 278 students. One hundred and ten students participated in the study. Their age ranged from 6.3 to 20.7 years with a mean of 12.3 years. Forty-seven (42.7%) were males and 63 (57.2%) females.

Every child was given a complete physical examination and PEFR (ASSESS portable device, Health Scan Products inc, NJ, USA). Skin prick tests were conducted on the volar surface of the forearms using a standard battery of skin tests, including standardised extracts of *D. pteronyssinus*, *D. farinae*, *Lepidoglyphus* destructor, *Tyrophagus putrescentiae*, grasses mix (*Dactylis glomerata*, *Festuca pratensis*, *Poa pratensis*, *Phleum pratensis*, *Lolium perenne*), weeds