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Rash, an uncommon but existing feature of H1N1 influenza among children

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To the editor:

Rash occurs in about 2% of patients with influenza A,[1–3] and it is also described in cases with pandemic A (H1N1) influenza.[4,5] In our department, rash was encountered in 5/52(9·6%) of hospitalized children, aged 3 months to 13 years, with confirmed, by RT-PCR, pandemic influenza A (H1N1). RT-PCR was performed, as previously described, by using the RealTime Ready Inf A/H1N1 Detection Set (Roche Applied Science, Mannheim, Germany).[6] The patients were not on medication when the rash erupted, except one patient who has been on lamotrigine for a year because of epilepsy attributed to tuberous sclerosis. Rash was non pruritic, it was petechial in three children and macular in two, involving mainly the trunk and face, scattering in the extremities, and it resolved within 2–5 days. All children were febrile, and they also had upper respiratory tract symptoms. The blood cultures were all sterile as well as the blood PCR for meningococcus which was performed in children with petechial rash prior to the administration of any antibiotic. The respective PCR was previously evaluated and has sensitivity 98·5% and specificity 96%.[7]

Thrombocytopenia was identified only in the child who was on lamotrigine. Her lowest platelet count was 72 000/mm^3. The three children with petechial rash were initially administered cefotaxime which was stopped when the results of blood culture and of PCR for meningococcus were available. All children were given oseltamivir on admission either with the clinical suspicion of influenza or because of a positive pharyngeal rapid antigen test for influenza. Oseltamivir was continued for 5 days on the basis of the positive PCR results for influenza H1N1.

The observed frequency of petechial rash among children with influenza H1N1 may be an overestimation as all children with petechial rash and fever are admitted to the hospital with the suspicion of meningococcal disease. Nevertheless, we would like to draw attention that rash should be pursued in children with symptoms of influenza, even in its troublesome petechial form, as it represents an uncommon but existing feature of pandemic A (H1N1) influenza, at least in childhood population.

It seems that the frequency of rash is substantially lower among adults. In fact, it was observed in only 1/426 patients, mainly adults, in the study of Cao *et al.*[8] whereas it was found in 5/251 children hospitalized in Argentina[9] without being specified if it was petechial or not and in 3/100 pediatric hospitalized patients from Israel[5] who all had petechial rash. No rash was mentioned among the symptoms of H1N1 influenza infection in two clusters found in Osaka in a secondary school and a nearby elementary school.[10] These clusters, however, consisted of outpatients with H1N1 influenza infection.

Therefore apart from the severe bacterial infections and the enterovirus infections, influenza virus can present with fever and petechial rash at least among affected children.

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