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Maculopapular rash and fever

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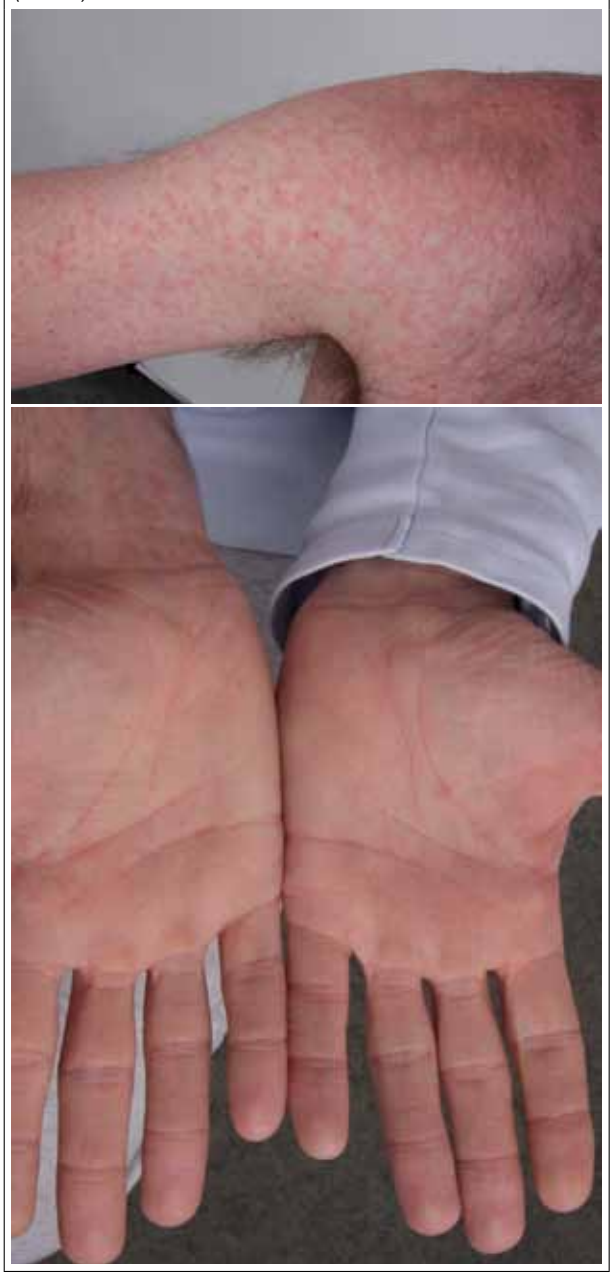
A 38-year-old man with no relevant previous medical history presented at our outpatient clinic with fever, malaise, dry cough and sore throat for six days. The day before presentation he had developed a non-itching rash on his face, trunk and arms. He had returned from Crete seven days earlier where he had stayed in an all-inclusive resort for two weeks with his wife and children (aged 2, 4 and 6 years). Two of his children had complained of aphthous lesions in the mouth but had otherwise not been ill. He had not been in contact with animals or insects and was not on any medication at the time of presentation.

On physical examination the patient was febrile with a temperature rising to 40.2 °C. An erythematous and maculopapular rash was apparent on the torso, face and to a lesser extent on the extremities and hand palms (*figure 1*). Furthermore, he had pharyngitis and the cervical, post-auricular and inguinal lymph nodes were slightly enlarged. Blood analysis results showed an elevated C-reactive protein (12.8 mg/l), leukopenia of 2.0 giga/l with a lymphopenia (0.3 giga/l) and 28% rods and a mild thrombocytopenia (146 giga/l). Chest X-ray showed no abnormalities.

Figure 1. *An erythematous and maculopapular rash on the torso (above) and the extremities and hand palms (below)*



WHAT IS YOUR DIAGNOSIS?

See page 48 for the answer to this photo quiz.

ANSWER TO PHOTO QUIZ (PAGE 43)

MACULOPAPULAR RASH AND FEVER

DIAGNOSIS

Our differential diagnosis included rickettsiosis, measles, lues, rubella and acute HIV infection. Antibiotic treatment with doxycycline was started. Serological analyses showed high titres of anti-measles IgM (8.03; reference <1.1) whereas IgG titres were merely elevated (0.84; reference: >0.7). Additionally, measles DNA was detected in urine and saliva samples using polymerase chain reaction, confirming the diagnosis of measles. The antibiotics were stopped and the patient was treated with supportive care. After discharge he also developed a measles-related keratitis from which he recovered completely.

Measles is a very contagious disease caused by measles virus, which usually presents with high fever followed by a characteristic rash. It rarely occurs in the Netherlands since the introduction of a single-dose vaccine in 1976. The vaccination coverage has been >95% since the introduction of a two-dose regimen of MMR vaccine in 1986. The last outbreak was reported in 2008 and included 99 measles cases, mainly amongst unvaccinated patients.[1,2] In March 2011 there were 14 reports of measles infections in the Netherlands. Also this year there have been outbreaks and a marked increase in the numbers of cases reported in several other European countries.[3,4]

Our patient was born before 1976 when the vaccine was introduced in the National vaccination programme and had therefore not been vaccinated. His wife and children were vaccinated. Most adults who grew up before 1976 have been in contact with the virus as a child and have therefore developed natural immunity. It seems that adults born between 1970 and 1976 are less likely to have natural immunity and are therefore at risk. Clinicians should be aware of measles as a possible cause in patients presenting with a febrile illness with an erythematous and maculopapular rash, especially in patients of this age group.

REFERENCES

1. Hahné S, te Wierik MJ, Mollema L, van Velzen E, de Coster E, Swaan C, et al. Measles Outbreak, The Netherlands, 2008. Emerg Infect Dis. 2010 Mar;16(3):567-9.
2. Wetsteyn JC, de Rond WM, Schreuder MC, de Boer HE, van Binnendijks RS, Wolthers KC. An outbreak of measles at an emergency room. Ned Tijdschr Geneeskd. 2008 Sep 13; 152(37):2032-6.
3. Moss WJ, Griffin DE. Measles. Lancet. 2011 Aug 17 [Epub ahead of print].
4. European Centre for Disease Prevention and Control http://ecdc.europa.eu/EN/ACTIVITIES/SURVEILLANCE/EUVAC/Pages/index.aspx