

# *Mycoplasma pneumoniae*-induced rash and mucositis (MIRM): an unusual mild skin rash associated with severe mucosal involvement

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## DESCRIPTION

A 10-year-old boy was referred to the paediatric department because of ulcerative and haemorrhagic mucosal lesions involving lips and oral cavity (figure 1). These caused significant pain and discomfort to the patient, needing intravenous hydration and nutritional support for some days. The child showed minimal skin involvement, consisting of a mild serpiginous eruption (figure 2), and some lesions were located in the genital and anal areas, too. No pre-existing diseases were reported and, importantly, no drugs were administered during the previous days; interestingly, he reported a self-limiting episode of cough and fever in the previous week. HIV, herpes viruses, cytomegalovirus, Epstein-Barr virus and parvovirus B19 infections were ruled out and no immunological abnormalities emerged. Interestingly, the child presented a serology indicating a recent infection with *Mycoplasma pneumoniae*, as an elevated specific IgM titre ( $>27$  UA/mL;  $nv < 10$  UA/mL) was recovered, whereas the corresponding IgG titre was negative. As the mucosal lesions were very painful and impaired oral feeding, a treatment with systemic steroids and clarithromycin was started in this patient, leading to a complete clinical remission within a week. Finally, no ocular disturbances were complained and, anyway, an ophthalmology evaluation excluded any eye diseases. Moreover, HLA-B51 genetic analysis was negative and, thus, based on all these findings along with the absence



**Figure 1** Mucosal involvement at two different time points.



**Figure 2** Minimal and non-specific skin lesions in the clinical setting of *Mycoplasma pneumoniae*-induced rash and mucositis.

of recurrence, a diagnosis of Behçet's disease was ruled out.

According to the diagnostic criteria proposed by Canavan *et al*, the patient could have diagnosed with *Mycoplasma pneumoniae*-induced rash and mucositis (MIRM; 1—skin detachment  $<10\%$  of body surface area; 2—suggestive lesions of at least two mucosal sites; 3—scattered atypical targets; 4—evidence of *M. pneumoniae* infection). As regards the last criterion, the evidence of *M. pneumoniae* infection must be supported by the clinical findings of atypical pneumonia with symptoms such as fever and cough and by laboratory investigations, including the increase of specific IgM antibodies and/or the detection of microbial genome by PCR. All these clinical features can help the physician to distinguish among the clinical spectrum of erythema multiforme/Stevens-Johnson syndrome/toxic epidermal necrolysis (being characterised with an extensive and progressively more severe skin involvement) and MIRM, where skin lesions are different and milder, explaining its previous and obsolete name of incomplete Stevens-Johnson syndrome.<sup>1</sup>

In conclusion, *M. pneumoniae*-associated mucocutaneous disease (also named as *M. pneumoniae*-induced rash and mucositis, MIRM) is usually characterised by a prominent mucositis with single or a few scattered skin lesions: isolated severe mucositis with oral and, in a lesser extent, urogenital lesions is quite common. This clinical condition is predominantly observed in children and adolescents and must be suspected in presence of Stevens-Johnson-like mucosal lesions that, actually, are not associated to an equally severe skin involvement, which can manifest through urticarial-like or



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## Learning points

- ▶ Among extra-pulmonary diseases related to *Mycoplasma pneumoniae* infection, *Mycoplasma pneumoniae*-induced rash and mucositis (MIRM) must be considered, in addition to Stevens–Johnson syndrome, hives and other non-specific skin rashes.
- ▶ MIRM is characterised with prevalent and remarkable mucosal lesions: as those often involve the oral cavity and are very painful, a steroid therapy (in addition to macrolides) could be beneficial to shorten the clinical course.
- ▶ Unusual serpiginous and annular skin rashes can be included in the heterogeneous group of skin manifestations of MIRM.

non-specific rashes.<sup>2 3</sup> In our clinical case, serpiginous annular lesions were the main cutaneous finding, which is an unusual skin manifestation in the clinical setting of MIRM.

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