

HAND, FOOT AND MOUTH DISEASE IN NORTHEASTERN PART OF ROMANIA IN 2012

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Abstract

Hand-foot-mouth disease (HFMD) is an acute viral infection that occurs usually among children in summer. This paper reports a high incidence of HFMD in children and adults, occurred in summer-autumn 2012 in the northeastern part of Romania. We present a few cases with some atypical clinical manifestations.

Key words: Enteroviruses; Hand, Foot and Mouth disease; Romania

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Introduction

Hand-foot-mouth disease (HFMD) is an acute viral infection that occurs usually among children in summer [1]. The diagnosis is based on clinical manifestations of oval vesicles on the hands and feet and painful oral mucosa ulcerations. It is a self-healing disease in great majority of cases, but sometimes with severe evolution and neurological complications [2].

Pediatricians and dermatologists should be aware of atypical manifestations.

Case Report

Case 1.

We were asked to see a 3 year-old boy hospitalised in Pediatric Department, with very high fever, nausea, diarrhea, abdominal pains, malaise, who was diagnosed with acute pharyngitis, with no good clinical evolution under antibiotics Claritromicin orally). It was the first days of June 2012 and among the first cases of HFMD (Fig. 1, 2).

Case 2.

A female student of 23 years old, was incapable of walking for many days, by a lot of small vesicles and erythema on the feet; she has also high fever, malaise, diarrhea and headache. In the fifth day she developed also a few vesicles on the palms, no oro-pharyngeal involvement (Fig. 3).



Figure 1. Vesicles on the feet



Figure 2. Vesicles and crusts around the mouth



Figure 3. Slight erythema, small papules on the feet

Case 3.

A case of HFMD diagnosed in a child by the classical clinical aspect, but who also presented small papules and vesicles and intense pruritus over the elbows (Fig. 4 a-d).

Case 4.

A 32-year-old female patient was referred to our

department because of round vesicles on the hands, slight erythema and pruritus, headache and fever (38,5 Celsius degrees). She was in good general state, no systemic complaints, no complications and the usual laboratory parameters were within normal limits. The fever lasted for 24 hours, no new vesicles were noted and a full recovery was obtained in the next 72 hours (Fig. 5).



Figure 4. A: small ulceration on the dorsal aspect of the tongue; B: vesicles spread over the entire plantar face of the feet; C: small erythematous vesicles and papules on the left hand; D: cluster of papul-vesicles around the elbow, excoriations due to pruritus



Figure 5. Round vesicles on the left hand

Case 5.

A 5 year old boy was addressed to us for an erythematous papulo-vesicle eruption distributed in the ano-genital area, on the limbs and a few papules scattered on the trunk; no oral manifestations, no systemic complaints, no fever but a long-lasting evolution (almost two weeks with full recovery) (Fig. 6 a-d).

Discussion

Enteroviruses are single-stranded, positive-sense RNA viruses in the Picornaviridae family. There are more than 100 human enterovirus serotypes, including 3 poliovirus serotypes, 23 coxsackievirus A (CA) serotypes, 6 coxsackievirus B (CB) serotypes, 31 echovirus serotypes, and 39 numbered enterovirus serotypes (EV68-71, EV73-102, EV104-107, and EV109).



Figure 6. A: vesicles distributed on the genital area; B: perianal lesions; C: grouped vesicles on the dorsal face of left foot; D: the perianal lesions observed 48 hours after the admission

Human enterovirus 71 belongs to the Human enterovirus A species of the genus Enterovirus of the family Picornaviridae and is a major causative agent of hand, foot and mouth disease (HFMD) (usually in children aged <5 years). EV71 was first isolated in 1969.

Coxsackievirus A16 (CA16) was the first viral agent isolated from patients with HFMD. Later CA4, CA5, CA6, CA9, and

CA10 as well as Coxsackievirus B (CB) were also found as etiologic agents for HFMD [3]. Recently, EV71 caused life-threatening outbreaks of hand-foot-mouth disease (HFMD) with neurological complications in Asian children (aseptic meningitis, acute flaccid paralysis and encephalitis) 1 and for this reason development of EV71 vaccines is a national priority in some Asian countries (Japan, China) [3,4].

Outbreaks have occurred recently in the Asia-Pacific region: Malaysia (2000-2003), Taiwan (1998-2005), Singapore (2000), Brunei (2006), Thailand (2008-2009), Korea (2008-2009), and Hong Kong (2008) [5].

The viruses implicate in HMFD spread by fecal-oral and respiratory routes, the contamination of other family members commonly occurs and the reinfection within the same family was recently described.

There is usually a prodrome consisting of low-grade or even high fever (especially in small children), anorexia, sore mouth, and malaise. Children younger than 5 years are most commonly affected. Oral lesions occur chiefly on the anterior buccal mucosa and tongue, where the vesicles transform rapidly in superficial ulcers with erythematous borders and sometimes very painful. The lesions on the palms and soles are papules or vesicles on a surrounding zone of erythema. Less commonly, the dorsal or lateral surfaces of the hands and feet may also be affected [6]. Involvement of the buttocks is common in small children. The eruptions are nonpruritic and usually resolve without crusting.

Onychomadesis is considered a more severe form of Beau lines. The definition of onychomadesis is: the separation of nail plate from nail bed starting at the proximal end and resulting in shedding of the nail. Onychomadesis is a silent sign of HFMD that can appear a few weeks after the viral infection [7,8].

The viral determination from stool, pharynx and vesicle is the mainstay of the diagnosis, although, because of the high price of these methods (not to mention the newest RT-PCR), the diagnosis is established in most cases by clinical grounds. Enteroviruses persist 1-4 weeks in the naso-pharynx and 1-18 weeks in the stool [9,10]

We confronted during summer-autumn 2012 with many cases, especially in children, but not rare in adults too. It was quite unusual to see so many different and interesting cases in a part of Europe (north-eastern of Romania) where we were used to diagnose one or two cases per year, or even in a few years. We were teaching our residents about this disease using pictures from books or from articles published in the

last years, mostly in Asia.

All our cases were not severe, with no complications, a 6-10 days evolution, high contagiousity among children; the diagnosis was only clinical, no virology tests were performed; with different and sometimes atypical picture, with all the laboratory parameters within normal limits.

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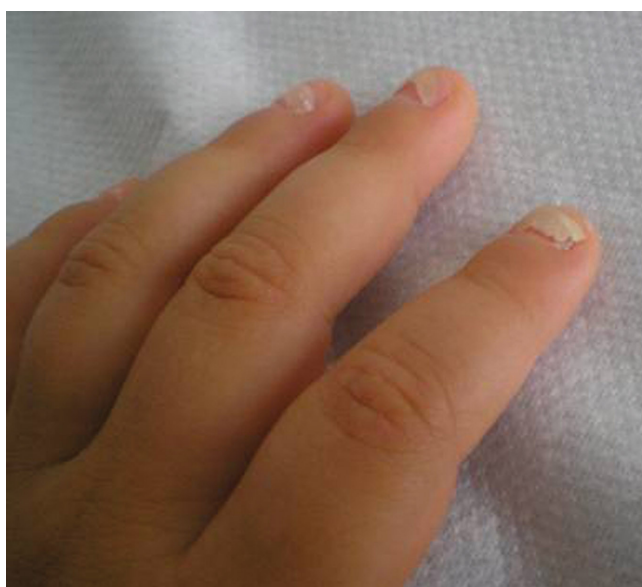


Figure 7. Onychomadesis in a small child (proximal separation of the nail plate from the nail bed with the shedding of the nail).