

Onychomadesis in A 7-Month-Old Child with Hand- Foot - Mouth Disease. Case Report in Armenia, Quindío

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ABSTRACT

Introduction: Hand-foot-and-mouth disease is one of the main viral infections in childhood, and although it is known to present a benign and self-limited course, it can also present a spectrum of long and short term complications among which dermatological manifestations and nail manifestations such as onychomadesis stand out, which although it is related to other etiologies is considered a secondary complication to viral diseases when preceded by symptoms suggestive of the same. This lesion usually causes alarm and anxiety in caregivers; however, it does not require specific management and adequate symptomatic management and general measures are sufficient to achieve a satisfactory evolution around 4-6 months later, with recovery of the nail's ad integrum after the initial clinical picture. The present study describes a clinical case in the city of armenia, quindío, of hfmd and onychomadesis, its diagnosis and follow-up.

Case Presentation: A 7-month-old male, with hand, foot and mouth disease, diagnosed by clinical manifestations, presented after two weeks with painless proximal nail bed detachment, but with resolution of skin eruptions, so associated with the epidemiological link described and excluding other etiologies, a diagnostic impression of onychomadesis was made. Follow-up with satisfactory clinical evolution.

Conclusion: The initial approach in the recognition of late complications of this pathology by the physician, allows an adequate orientation to parents, about its benign and transitory course, in order to reduce recurrence of consultation in the emergency department, referrals and unnecessary treatments, in addition to reducing the rate of anxiety and concern in attendance.

Keywords: Hand; Foot and Mouth Disease; Onychomadesis; Exanthema; Dermatology; Nail Diseases

Introduction

Onychomadesis is defined as the painless and inflammation-free separation of the nail plate from the matrix in its entire thickness, at the proximal level, without affecting its distal adherence, and can occur at the level of the hands and feet [1,2]. Its appearance has been related to various causes such as trauma, systemic and dermatological diseases, autoimmune diseases, the consumption of some medications (such as chemotherapeutics, anticonvulsants, some antibiotics, among others), and viral infections, among which the disease stands out. Hand - foot - mouth (epmb) with which it has been documented [3,4]. Epmb is a frequent viral infection in childhood, whose causal agent is enterovirus. The serotypes most frequently associated

with the development of this pathology are coxsackie a16 virus and enterovirus a71; clinically, it is manifested by the presence of an oral enanthem accompanied by a generally maculopapular or vesicular rash on the hands and feet, associated with the presence of occasional fever and on some occasion's dissemination of the outbreak [2,3].

Onychomadesis is a late complication of epmb, it occurs approximately 4 to 10 weeks after the viral episode, it is produced by a temporary interruption of matrix growth, and although the mechanism by which it occurs is not precisely known, there are some hypotheses. Who try to explain this interruption, one related to the systemic repercussion secondary to the disease, the second related to the presence of characteristic skin lesions of pmbd at the nail

level; lastly, the possibility that this process is secondary to direct replication of the virus at the matrix level is not ruled out [1,4,5]. The diagnosis of this entity is made clinically and taking into account its clinical course with mild symptoms and its self-limitation, there is no specific treatment, evidencing an adequate resolution of the condition when there is no structural damage at the level of the nail bed, with a full recovery in approximately 12 weeks, or even less in children [1,4]. Onychomadesis is characterized by a class of palmoplantar vesicular eruption and erosive stomatitis, it is more frequent in children under 10 years of age, but it can also occur in adult patients, in addition to its usual presentation in more severe cases, this is it can present in the perioral area, trunk, neck and extremities. The association between epmb and onychomadesis has been described on multiple occasions in different parts of the world, for the first time in the year 2000 in the usa and later in other continents with presentations of sporadic or even endemic cases related to outbreaks of epmb [1,6]. This article presents a clinical case of a minor infant with a picture compatible with onychomadesis, with a history of epmb in the city of armenia quindío, taking into account that in the literature review no reports were found in the department and the reports nationally are rare.

Clinical Case

This is a 7-month-old male infant from armenia (q), with no significant medical or perinatal history, who consulted a third-level hospital with his parents, reporting a clinical picture of 5 days of evolution consisting of sudden appearance of skin lesions, characterized by being microblistered with erythematous edges, initially around the mouth, later disseminated to the hands and feet, the parents reported that after the onset of said lesions they presented quantified temperature rises of up to 38.5°C, for which they administered oral acetaminophen, with a slight improvement in symptoms. At the time of evaluation, the patient was febrile, but tolerating the oral route, for which symptomatic management with oral antipyretic was continued, in addition to local measures. In this way, by clinic, the diagnosis of foot-hand-mouth disease is made. It is indicated to continue with antipyretic, local measures on skin lesions, and pediatric outpatient follow-up appointment, in addition to general recommendations and warning signs to re-consult the emergency department.

At the end of 20 days, the patient attends a follow-up with the pediatrician, the parents report the presence of sudden onset flaking in the proximal region of the toenails, they deny trauma or other events that explain the lesions, during evaluation at the on inspection, complete proximal detachment of nail plates was evidenced in the toenails, which, associated with the previous diagnosis of foot-hand-mouth disease, suggests the presence of characteristic onychomadesis as a late complication of this pathology of viral origin (Figure 1). Thus, general cleaning measures were indicated, keeping the nail area dry, in addition to avoiding traumatism, counseling was given to the parents explaining said benign entity, and the possible detachment of the nail deliberately. Two months after the initial event, the child was seen

in the pediatric outpatient clinic. The parents manifested complete resolution of the skin lesions and the detachment of some toenails, without being associated with other symptoms (Figure 2). Therefore, the pediatrician is discharged, with general recommendations, control of growth and development, and vaccination according to the national immunization plan.



Figure 1: A and B correspond to a late complication of hand-foot-mouth disease: Complete nail detachment of proximal nail plates in feet..



Figure 2:

Ethical Considerations

Patient's guardian authorized the publication and disclosure of the case by means of an informed consent that rests in annexes of this investigation.

Discussion

Most rash diseases present in childhood and therefore cause concern and anxiety in parents, and as a result, a large number of primary care consultations related to these entities. Although it is

known that most cases are diseases that do not require etiological treatment and are mostly benign and self-limited, it is also known that they are not without complications. In this specific case, the case of hand foot mouth disease is cited as a reference, as it is characterized by skin lesions and general symptoms, which normally resolves in approximately one week and the prognosis is good; delayed diseases such as meningoencephalitis and involvement of the nail bed respectively, in which the latter range from Beau's lines to complete detachment of the nail bed at the proximal level known as «onychomadesis» [1,7]. Onychomadesis is a rare complication, but it represents an entity to consider in the follow-up of patients, so it is important to investigate the patient's history for the presence mainly of previous respiratory symptoms, abdominal pain and/or fever, which may be directly related and suggest a previous viral etiology as the cause of this pathology [1,8]. In this sense, as doing Ling [9,10] states, hand, foot, and mouth disease is one of the rash diseases associated with different enterovirus infections, especially coxsackievirus A16, where the infection routes are respiratory and fecal-oral. Epidemiologically it is predominantly in the male gender and in older than 5 months. The course of the disease can be configured by feverishness, anorexia and catarrhal or digestive symptoms with vesicular pustular lesions in the mouth, hands and feet, which generally resolve in a week and exceptionally, as evidenced in this patient, can be described within the first 2 weeks after the onset of the clinical picture, the appearance of signs of arrest in the proliferation of the nail matrix leading to the appearance of partial or total damage to the nail plate, however, compared to other latitudes such as the USA as described by Mathes [11], this picture begins after 4-6 weeks, differing from what was reported [11].

Regarding the presumed diagnosis of this pathology, in the case described, the proximal detachment of the nail bed in the toenails was evident from the first control, ruling out other possible causes of said disorder such as recent trauma or drug use, so taking into account the symptoms presented, a diagnosis of onychomadesis secondary to hand, foot, and mouth disease was made, agreeing with what is described in the literature, in which it is mentioned that the diagnostic basis is an adequate clinical history with emphasis on the anamnesis, ruling out other etiologies of the condition and looking for the presence of previous symptoms that suggest a recent viral infection by coxsackievirus [1,12]. On the other hand, one of the concerns that parents are most concerned with is related to the treatment and prognosis of this entity, which due to its benignity and self-limitation is based on symptomatic management such as the one provided to our patient (maintaining the nail bed clean and dry, without requiring additional pharmacological) [1,2]. In this case, the patient has been observed for a considerable period of time (two months), sufficient to observe adequate progress and resolution of the condition and to incorporate a strong preventive and health promotion content as part of comprehensive care, in addition of quality information and resolution of doubts to the family, contributing to improve knowledge and care practices as the main tool to improve the health of children and reduce the incidence of

episodes of infectious diseases.

Finally, the importance of exposing this type of cases lies in providing tools to health personnel to carry out an adequate approach, focus, diagnosis and treatment, taking into account the frequency that nail disorders in children represent as a reason for consultation and that, for its forms of presentation are cause for concern for parents, since by being aware of the presence of these complications, caregivers can be warned about their possible appearance and course.

Conclusion

Hand, foot, and mouth disease represents one of the most common viral diseases in childhood, with a spectrum that goes beyond skin lesions, and multiple subsequent complications, with onychomadesis being one of the most frequent, but least described, especially at the end of the COVID-19 pandemic, thus being a reason for anguish in parents in the face of the findings. It is for this reason that it is necessary mainly for the general practitioner, since it is usually the first approach of these patients in the emergency services, to know this late complication, and to provide adequate information, accompaniment and education to the caregivers to influence positive way in the course of this entity, avoiding unnecessary treatments and re-consultations.

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