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Approach to hand-tooth-mouth disease in Belo Horizonte daycare: an experience report

EXPERIENCE REPORT

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Abordagem sobre a doença mão-pé-boca em uma creche de Belo Horizonte: um relato de experiência

ABSTRACT

Introduction: Hand-foot-and-mouth disease (HFMD) is a viral disease that affects children under five years of age, with contamination via the oral/fecal route. It exteriorizes forming spots and blisters on the hands, feet and mouth. It may have other manifestations, and only symptomatic treatment is required. It has risk factors, such as playing with contaminated children and using shared places, thus, having hygiene as a preventive measure. **Objective**: To make professionals of a day care center aware of the prophylaxis and adequate control of HFMD. **Experience report:** The extensionist intervention took place in the first half of 2022 in a peripheral day care center in Belo Horizonte/MG. A didactic video about HFMD was created, containing its symptoms, treatments and prevention. The video was shared online in MB4 format, more specifically through corporate groups on the WhatsApp social network. The day care center employees who had watched the video reported to the students, through informal conversations, that their doubts about the disease were clarified and showed satisfaction with the methodology used to exchange knowledge. **Final considerations**: The extension action proved to be effective, since

it was able to contribute to the construction of knowledge about the Hand-foot-mouth disease of the target audience

Keywords: Hand, Foot and Mouth Disease; Health Education; Primary Prevention; Community-Institutional Relations;

RESUMO

Introdução: A Doença Mão-pé-boca (DMPB) é uma doença viral que afeta crianças menores de cinco anos, tendo sua contaminação por via oral/fecal. Exterioriza-se formando manchas e bolhas nas mãos, pés e boca. Pode ter outras manifestações e apenas o tratamento dos sintomas é necessário. Possui fatores de risco, como brincar com crianças contaminadas e utilizar locais compartilhados, tendo assim a higienização como medida de prevenção. **Objetivo:** Conscientizar os profissionais de uma creche sobre a profilaxia e controle adequado acerca da Doença Mão-pé-boca. **Relato da experiência:** A intervenção extensionista ocorreu no primeiro semestre de 2022 em uma creche periférica de Belo Horizonte/MG. Foi elaborado um vídeo didático acerca da HFMD, contendo seus sintomas, tratamentos e prevenções. O compartilhamento do vídeo se deu via online no formato MB4, mais especificamente por meio de grupos coorporativos na rede social WhatsApp. As funcionárias da creche que assistiram ao vídeo relataram aos alunos, por meio de conversas formais, que suas dúvidas a respeito da doença foram esclarecidas, além de demonstrarem satisfação com a estratégia utilizada para troca de conhecimentos. **Conclusão:** A ação de extensão mostrou-se efetiva, uma vez que conseguiu contribuir para a construção de conhecimento sobre a Doença Mão-pé-boca do público-alvo.

Descritores: Doença de Mão, Pé e Boca; Educação em saúde; Prevenção primária; Relações Comunidade-Instituição.

INTRODUCTION

Hand-foot-and-mouth disease (HFMD), also known as hand-foot-and-mouth syndrome, is an infectious disease that affects children under 5 years old and, in some cases, can even affect teenagers and adults. It can be caused by different viruses, including mainly Coxsackierovirus A16 (CA16) and Enterovirus 71 (EV71)[1]. Contamination of enteroviruses occurs through oral ingestion of the virus, via vesicular fluid or oral secretions from infected hosts[2] and also from mother to fetus.[3]

After infection, viruses replicate in the palatine tonsils, oral mucosa, and Peyer's patches of the digestive tract.. Furthermore, they are resistant to pH variations and, due to this fact, when they overcome the gastric barrier, they multiply in the small intestine.[4] Viral implantation starts in the buccal and ileal mucosa and is followed by dissemination to lymph nodes within 24 hours. Shortly afterwards, viremia quickly follows, with spread to the oral mucosa and skin, and by the seventh day, neutralizing antibody levels increase and the virus is shed.[3] Furthermore, the incubation period for the virus can vary, usually lasting from 3 to 7 days, and may remain viable in oral mucosa secretions for up to 2 weeks and in feces for up to 8 weeks after infection.[4,5]

The mildest form of the infection results in a fever that precedes the formation of spots and blisters that first form on the hands, feet and mouth. In most cases the infection is treated quickly, however, in some cases, meningitis, paralysis similar topoliomyelitis[6] or even severe neurological complications.[7] Fever duration of more than three days, body temperature greater than 37.5°C, lethargy, hyperglycemia, vomiting, increased neutrophil count, EV71 infection, and young age are risk factors for severe HFMD.[8] It is important to differentiate HFMD from other conditions, such as eczema herpeticus, varicella-zoster virus, among others, as HFMD is self-limiting and only requires treatment of symptoms.[9]

No specific laboratory test is used to diagnose HFMD, so the diagnosis can be made simply from the clinical appearance and symptoms.[10] Some cases of infection may be asymptomatic, however, the most common symptoms of the disease are fever associated with formation of erythematous macules on the hands and feet, with small non-pruritic vesicles. Painful aphthous lesions also appear on the oral mucosa, causing difficulty in eating and drinking fluids, which can lead to dehydration. There may also be a sore throat, malaise, irritability and loss of appetite.[11]

The management of the disease is only done, in most cases, with the treatment of the symptoms, since the disease spontaneously regresses after a few days, adequate hydration and nutrition of the patient is maintained, using antipyretics and anti-inflammatories.[12] Identifying cases who are likely to develop a severe form of the disease is the main objective of primary care physicians in order to admit them to the hospital for observation, investigation and prior treatment.[1]

The prognosis of HFMD is good, except in large epidemics caused by human enterovirus 71, in which neurological complications and death were reported, especially in children.[13]

Studies of large outbreaks of childhood HFMD in China have shown that risk factors for HFMD included playing with neighborhood children, visiting medical clinics, and community exposures such as schools that children attend.[14,15] In this study, good hand washing techniques hands by preschool children and their caregivers had a significant protective effect against HFMD in human enterovirus infection 71.[14] Other studies also conducted in China showed that most children with HFMD had vitamin A insufficiency, which was associated to their reduced immunity and susceptibility to the most severe form of the disease.[16]

Currently, the most effective prevention measures for HFMD are hand washing[14,17], disinfecting common areas/shared toys, and limiting exposure by keeping sick children away from schools or day care centers.[18] For the containment of pandemics, hand hygiene should be put in focus through programs that encourage and encourage adherence to this habit in the long term. In this way, communicable diseases, outbreaks and new pandemics will be prevented. Entities such as governments, private and public sectors, as well as universities and civil society must act in collaboration in the pursuit of this change in behavior, favoring hygiene practices.[19]

Additionally, topical disinfectants show varying ability to inactivate the virus to prevent transmission.[20] In 2020, a studycarried out in China demonstrated the

clinical efficacy of three inactivated vaccines against enterovirus A71 in the prevention of severe HFMD in children aged 6 to 36 months.[21] The development of a globally representative multivalent HFMD vaccine is therefore recommended.[22]

In this scenario, in recent years, an increase in the number of HFMD cases has been observed in several countries and one should be alert to new cases in Brazil. From this perspective, outbreaks with characteristic symptoms of the disease have recently been reported, such as extensive and severe eruptions in various regions of the country, mainly in school regions.[23] In 2018, in the Notifiable Diseases Information System (SINAN), three (03) outbreaks with 107 people affected and in 2022 there is the presentation of a scenario of aggravation in the state of Minas Gerais, and the Syndrome is not considered a Compulsory Notifiable Disease, for this reason only situations that occur outbreaks are notified.[24.25]

Given this, it is important to develop educational practices aimed at building knowledge about HFMD, especially those that value the knowledge and prior knowledge of the population that deals directly with the population affected by the disease. In this context, it is possible to emphasize educators and professionals who work in early childhood education, in kindergartens or schools. Educators and professionals from early childhood education institutions can be qualified to develop safer work processes that can, to some extent, prevent HFMD outbreaks among the children they monitor. [26-30]

In the present report, the experience lived through an extension action focused on health education, aimed at educators and professionals who worked in a day care center in the city of Belo Horizonte. The educational action aimed to build knowledge and encourage changes in hygiene habits to control SMPB, through the preparation and dissemination of an educational video. Thus, the objective of the work wasraise the awareness of professionals at a day care center about prophylaxis and adequate control ofHand-foot-mouth disease.

EXPERIENCE REPORT

This is a descriptive study, of the experience report type, experienced in a university extension action carried out during the first half of 2022. Extension actionswere developed with professionals from a non-profit daycare center located in a community in Belo Horizonte/MG, more precisely in the South Zone of the capital.

The action developed health education activities for the day care professionals, with the participation of professors and students of the medical course at the Faculdade Ciências Médicas de Minas Gerais (FCMMG), linked to the extensionist discipline Formative Practice in the Community II (PFC-II).

The theme chosen for the action was based on field research on potential problems, through joint discussions with the school staff, on the main doubts that the professionals (educators, assistants and coordinators) had about children and their day to day needs. Among the main questions, doubts about the dis-

semination and characteristics of Hand-Foot-Mouth Disease (HFMD) were highlighted (Figure 1).

FIGURE 1.CLINICAL SIGNS OF HAND-FOOT-MOUTH SYNDROME

SOURCE:IMAGE FROM THE VIDEO PREPARED BY THE AUTHORS.

In this sense, the extensionists understood that, with the recent increase in the number of cases, information about HFMD should be disseminated in a democratic way, especially in environments with a greater focus of transmission, considering that with greater knowledge regarding care and prevention of HFMD, there may be a possible reduction in transmission, consequently, in the number of mild cases and, mainly, in the number of severe cases. In addition, the educational action on HFMD in the extension field in question,showed up mThis is even more necessary when performing an analysis of the age group enrolled in the day care center (from 0 to 6 years old), which is predominantly the highest rate of disease involvement.

After defining the theme to be worked on in the field of action, the students carried out a bibliographical survey in books and databases: PUBMED,SCIELO and Cochrane Library, about information about the disease and what would be the best ways to provide this information to the professionals who worked at the day care center.

Thus, in order to meet the democratization of access to knowledge on the subject, the extension agents chose to use the video pedagogical tool, as a way of helping the target audience to develop scientific knowledge.

The strategy chosen by the group was the elaboration of a short animated video, explanatory and easy to understand, with the intention of being informal and quick, which could be repeted as many times as necessary for the institution's current and future collaborators.

The making of the video required the use of an online editing system, called Powtoon, as well as a script directing the narrator's speeches and with guidelines on when and which elements would enter the video, in order to maintain the congruence, didactic and practicality factor. previously mentioned. Therefore, the audio was recorded separately with amateur recording materials, but that did not detract from the overall result of the action.

The video is 3 minutes and 43 seconds long, and can be accessed through the link:<https://youtu.be/TrqcTu8cEjA>, and the main topics addressed are active prevention, that is, changes in the daycare environment itself, such as proper disposal of diapers and wipes in closed garbage cans and reactive prevention, which is intervention in risky behaviors, such as avoiding sharing bottles among children and distinguishing them from other similar diseases, such as chickenpox.31 In addition, the video it also elucidates

how to identify the main symptoms of the disease, such as the eruption of small blisters on the palms of the hands and soles of the feet (Figure 2).

FIGURE 2. EXAMPLES OF DISEASE CONTAGION PREVENTION ADDRESSED IN THE VIDEO.

SOURCE:IMAGE FROM THE VIDEO PREPARED BY THE AUTHORS.

The video was shared online in MB4 format, more specifically through corporate groups on the WhatsApp platform, to the employees' personal telephones, in addition to being played during institutional meetings at the day care center.

THEORETICAL REFLECTIONS

Guerra et al.bringthat education is fundamental to reduce the transmission of HFMD among children, favoring the reduction of the incidence of the disease in the population2. Like this, this action tends to contribute, long-term,with the construction of knowledge about the HFMDthroughreproductionof the video among the target audience, with the expectation of generating changes in the practices carried out at the day care center, both in individual and collective aspects (such as the regular disinfection of places with a high flow of children, also being a prophylactic measure as exposed by Harada et al).20

As for the limitations found in carrying out the action and in the methodology, it is important to emphasize that due to the fact that the main tool was a visual media shared outside a public video platform, the number of day care center employees who actually accessed it is inconclusive. to the video. In a next opportunity, the extensionists should pay attention to the monitoring of the variable number of accesses, which can be important to estimate the reach of the action.

On the other hand, the intervention, because it is done remotely, allows the audiovisual resource to be accessed several times at any time and place, with no limitations in this regard, which can be a facilitator with regard to logistics, due to that there is no influence of factors such as transport and compatibility of schedules.

According to Moreira et al., health promotion in the school environment faces several obstacles, such as: the difficulty of articulating and integrating projects at school, the lack of institutional support for actions, the lack of time in the face of excessive demands. schools and the lack of pedagogical resources that contribute to preventive actions.32 In this action, some of these obstacles were overcome. Since the actions and tools developed were well accepted and had a high potential for health promotion.

The intervention through the audiovisual resource proved to be effective as the day care center employees who had watched the video reported to the

students that their doubts about the disease were clarified. In addition, through informal conversations, they demonstrated satisfaction with the presence of students in the day care center and with the methodology used to exchange knowledge.

Thus, it is possible to conclude that the video clarified the Hand-Foot-Mouth Disease topic and its guidelines well, making the chosen strategy efficient, mainly, in the context in which the local team is inserted, since the daycare center's work demand is intense and the professionals have little time to engage in training activities. The positive results also justify the use of the video not only in day care, but that it be passed on to parents and/or guardians.

Adherence to the extensionist action benefits not only the children at the daycare center, but the professionals, the daycare center itself and the community itself, in order to prevent the spread of the disease.illness. Of thatThus, in view of all the above, the importance of extension becomes evident, considering that Higher Education Institutions (HEIs) are reflections of the population, which participate in the transformations that have occurred in political, economic and social aspects.

It is noticed that HEIs have great potential both in terms of change and social conservation, living up to the extensionist actions developed during student training, presenting as a proposal the training of more humane professionals.

In addition, the dissemination of information about HFMD is an important strategy for reducing the impact of diseases caused by viruses, transmitted orally, thus contributing to prevention and health promotion.

FINAL CONSIDERATIONS

Hand-foot-mouth disease is an infectious disease that mainly affects children under 5 years of age, manifested by the presence of spots and blisters that form primarily on the hands, feet and mouth. In this way, it is extremely important to promote health actions that train professionals who work in environments with a greater focus of transmission on the most relevant aspects of the disease, such as its prevention, democratizing access to knowledge on the subject.

Taking into account the aspects mentioned in the article, the video promoted health education for the target audience composed of daycare professionals and was able to show the impact that extension activities have on behalf of the external community, approaching the objectives of the Promotion of Health Health and the practice of Preventive Medicine. In addition, it highlights the importance of building academic knowledge integrated with the knowledge of the school community, especially to improve the health and quality of life of the population, through the integration of daycare professionals with extension workers.

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