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CASE REPORT/OLGU SUNUMU

Epididymo-Orchitis Caused by Hand, Foot, and Mouth Disease In Adults

Erişkinde El Ayak Ağız Hastalığına Bağlı Epididimoorşit

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Abstract

Hand, Foot, and Mouth Disease (HFMD) is predominantly recognized as a childhood disease and is not generally anticipated to manifest in adults. In addition to inducing symptoms such as fever, herpangina, and distal-extremity rashes, HFMD can also lead to rare complications such as encephalitis and onychomadesis. Epididymo-orchitis, however, is not considered an expected complication of HFMD.

In our case, a patient diagnosed with HFMD presented with testicular pain four days later, and epididymo-orchitis was subsequently identified in the patient initially suspected of testicular torsion. Cases of Coxsackie virus-related epididymo-orchitis have been reported in the literature, and these cases can be mistaken for torsion, thereby posing the risk of unnecessary surgical interventions. Testicular pain in a young adult with a history of HFMD should be considered a potential diagnosis of viral epididymo-orchitis.

Keywords: Hand, Foot, And Mouth Disease, Epididymo-Orchitis, Coxsackie Virus

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Öz

El, Ayak ve Ağız Hastalığı (HFMD), ağırlıklı olarak çocukluk çağı hastalığı olarak kabul edilmektedir ve genellikle yetişkinlerde ortaya çıkması beklenmemektedir. HFMD, ateş, herpanjina ve distal ekstremite döküntüleri gibi semptomları tetiklemenin yanı sıra ensefalit ve onikomadezis gibi nadir komplikasyonlara da yol açabilir. Ancak epididimo-orşit, HFMD'nin beklenen bir komplikasyonu olarak görülmemektedir.
Bu olguda HFMD tanısı alan bir hasta dört gün sonra testis ağrısı şikayetiyle başvurmuş ve testis torsiyonundan şüphelenilen hastada daha sonra epididimo-orşit tespit edilmiştir. Literatürde Coxsackie virüsüne bağlı epididimo-orşit vakaları bildirilmiş olup, bu vakalar torsiyon ile karıştırılarak gereksiz cerrahi girişim riski oluşturabilir. HFMD öyküsü olan genç bir yetişkinde testis ağrısı, potansiyel bir viral epididimo-orşit tanısı olarak düşünülmelidir.

Anahtar Kelimeler: El, Ayak, Ağız Hastalığı, Epididimo-Orşit, Coxsackie Virüsü

INTRODUCTION

Hand, Foot, and Mouth Disease (HFMD) is a viral eruptive disease primarily caused by Coxsackie A16 and Enterovirus 71. The disease mostly afflicts children under 10 years of age and is rarely observed in adulthood, probably due to the safeguarding effect of cross immunity from previous enterovirus infections. The most common clinical findings encompass fever, herpangina, and distal-extremity rashes (1). Rare sequelae such as onychomadesis and encephalitis may manifest in the aftermath of the infection (2, 3).

Epididymo-orchitis is a disease usually observed in young men, often attributed to Chlamydia trachomatis and Neisseria gonorrhoeae (4). Mumps, Influenza, HIV and the Coxsackie viruses have been identified as causative agents of epididymoorchitis in adult men (5).

HFMD is predominantly recognized as a childhood disease and is not generally anticipated to manifest in adults. Epididymo-orchitis is not among the expected clinical findings in HFMD. In this case, we present a rare complication in adults, a demographic that is uncommon for HFMD. Our objective is to depict a case of epididymo-orchitis attributed to HFMD in the adult population.

CASE REPORT

A 34-year-old male patient, without any known comorbidities and a surgical history limited to appendectomy, presented with complaints of widespread muscle pain that started 2 days prior, accompanied by redness in the throat, fever exceeding 39 ℃, and rash on his hands and feet (Figure 1).

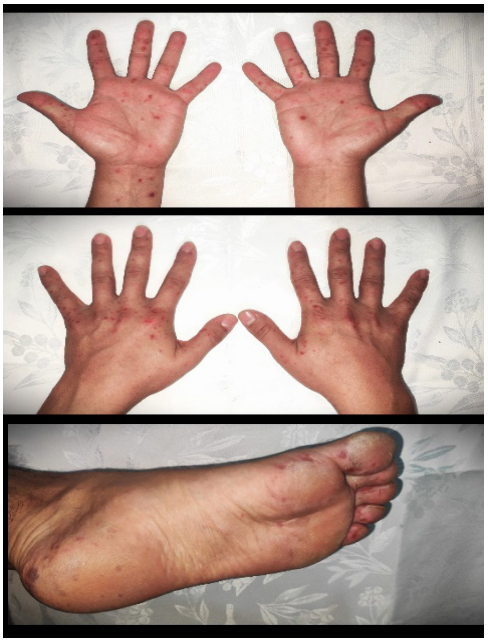

Figure 1. Rashes on hands and foots

In the history, it was ascertained that the patient's son was diagnosed with HFMD four days prior. Given the presence of typical symptoms and rashes, coupled with the recent identification of the same disease in his son, he was diagnosed with HFMD without the need for additional testing. The patient was advised to undergo symptomatic treatment and adhere to isolation measures. Three days later, the patient presented with radiating pain from both testicles to the inguinal region, more prominent on the right side, and a fever of 40°C. The patient was referred to the emergency room with suspicion of testicular torsion. Doppler ultrasonography revealed epididymo-orchitis bilaterally. There was no suspicious sexual intercourse or urinary tract infection in the patient's history. Coxackie A IgM was tested to confirm the diagnosis and was found to be positive. The patient was considered to have epididymo-orchitis due to Hand, Foot, and Mouth Disease. Testicular elevation, analgesic and antipyretic therapy, and cold application were advised to the patient. After a 7-day antibiotic-free follow-up, the patient's symptoms alleviated, and follow-up ultrasonography indicated regression of epididymo-orchitis.

CONCLUSION

HFMD is predominantly recognized as a childhood disease. Consequently, transmission to adults is frequently overlooked by both patients and healthcare professionals. In adults, epididymo-orchitis is commonly attributed to bacterial factors, usually arising after suspected sexual contact or urinary tract infection. Post-viral epididymo-orchitis is often associated with mumps (6). It may not be considered that such a complication may ensue following HFMD.

In 2014, Vuorinen et al. demonstrated that Coxsackie A virus, isolated for the first time from the epididymal fluid in a case undergoing surgery for testicular torsion, could induce epididymo-orchitis, highlighting the potential risk of unnecessary surgical interventions (7). In the case report of Di Lella et al. (2021) reported a case with testicular mass and viral epididymo-orchitis attributed to HFMD (8).

In this case, it is aimed to emphasize the occurrence of HFMD in adults and the potential detection of epididymo-orchitis as a consequence. In conclusion, contemplating the diagnosis of viral epididymo-orchitis in individuals with recent HFMD history presenting symptoms of testicular pain and swelling will mitigate unnecessary surgical interventions and inappropriate management.

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REFERENCES

1. Ventarola D, Bordone L, Silverberg N. Update on hand-foot-and-mouth disease. *Clin Dermatol*. 2015;33(3):340-346.
2. Yüksel S, et al. Onychomadesis—a late complication of hand-foot-mouth disease. *J Pediatr*. 2016;174:274.
3. Shah J, et al. Neurological complications of hand, foot and mouth disease in children: a review. *J Ayub Med Coll Abbottabad*. 2020;32(4):562-569.
4. Holmes K, Berger R, Alexander E. Acute epididymitis: etiology and therapy. *Arch Androl*. 1979;3(4):309-316.
5. Liu W, et al. Viral threat to male fertility. *Andrologia*. 2018;50(11).
6. Ludwig M. Diagnosis and therapy of acute prostatitis, epididymitis and orchitis. *Andrologia*. 2008;40(2):76-80.
7. Vuorinen T, et al. Epididymitis caused by coxsackievirus A6 in association with hand, foot, and mouth disease. *J Clin Microbiol*. 2014;52(12):4412-4413.
8. Di Lella E, et al. An unusual location of hand, foot and mouth disease. *J Ultrasound*. 2021;24(1):1-4.