

An Adult Patient who Presented to Emergency Service with a Papular Purpuric Gloves and Socks Syndrome: A Case Report

Papüler Purpurik Eldiven ve Çorap Sendromu ile Acil Servise Başvuran Yetişkin Bir Hasta: Olgu Sunumu

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SUMMARY

Rash diseases characterized macules, papules, vesicles and pustules. Many viral infection associated with generalized morbilliform skin rash. Papular purpuric gloves and socks syndrome (PPGSS) is a clinical situation caused by human parvovirus B19. PPGSS occurs at hands and foot through lesions exhibiting symmetrical gloves and socks-like erythematous dispersion. Concomitantly, there are lesions and fever at mouth. A 35 years old woman applied with papular symmetrical eruption at hands and foot, oral lesions and fever. There existed symmetrical rashes at hands and foot and lesions in mouth during her physical examination. Parvovirus Ig M positive were determined. The patient who was administered symptomatic treatment was externalized.

Key words: Emergency service; erythema infectiosum; papular purpuric gloves and socks syndrome (PPGSS); parvovirus B19.

ÖZET

Makül, papül, vezikül ve püstüllerle seyreden hastalıklara döküntülü hastalıklar denir. Pek çok viral enfeksiyon, jeneralize morbilliform deri döküntüleri ile ilişkilidir. Papüler purpurik eldiven ve çorap sendromu (PPGSS), insan parvovirus B19 virüsünün sebep olduğu klinik bir durumdur. El ve ayaklarda simetrik eldiven ve çorap tarzı lezyonlar ile beraberinde ağızda lezyonlar ve ateş vardır. Otuz beş yaşında kadın hasta el ve ayaklarda papüler simetrik döküntü, aftöz orofarengeal lezyonlar ve ateş ile başvurdu. Fizik muayenesinde el-ayaklarda simetrik döküntüler ve ağızda aftöz lezyonlar mevcuttu. Parvovirus Ig M pozitif saptanan hasta semptomatik tedavi uygulanarak taburcu edildi.

Anahtar sözcükler: Acil servis; eritema infeksiyozum; papüler purpurik eldiven ve çorap sendromu (PPGSS); parvovirus B19.

Introduction

Parvovirus B19 is a single-stranded DNA virus.^[1,2] It causes acute infection erythema infectiosum in non-immunocompromised individuals, temporary aplastic crisis in patients with chronic hemolysis, and acquired pure red cell aplasia in those who have immune deficiency. Rash diseases are characterized by macules, papules, vesicles, and pustules. Many viral infections are associated with generalized morbilliform skin rashes. Erythematous macules and papules, or less often vesicles and petechiae, are usually centrally localized and leave palms and soles free of disease.^[3] Erythema infec-

tiosum is the most frequently seen symptom of Parvovirus B19 infection. It occurs most frequently in children between 4 and 11 years of age. Joint ailments such as arthritis and arthralgia are seen more in adults.^[1,2] Fetal infection results in hydrops fetalis.

Gloves and socks syndrome, and less often hemophagocytosis, acute hepatitis, and cardiomyopathy can be seen due to this virus. We presented in this case report a gloves and socks syndrome associated with parvovirus B19 in a 35-year-old female patient who was admitted to the emergency service with skin rashes, oral lesions, and fever.

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Case Report

A 35-year-old female patient had the complaints of rashes on her hands and feet, sore throat, high fever, and a burn/sting during urination when she was admitted to the emergency service. The patient, who did not have any known history of disease, had itchy hands and feet about five days before admittance, which sparked a high fever. The patient was conscious, oriented, and cooperative during her physical examination and her physical findings were TA: 120/80 mmHg, pulse 102/min, and fever 39.5°C. The patient's neck stiffness and lymphadenomegaly could not be measured. There were aphthous lesions in her oropharynx hyperemic and oral mucosa. She had petechial rashes of the gloves and socks type, and a macular appearance that did not go pale when pressed (Figure 1). Her other system findings were ordinary. Before presenting to the emergency service, she used antibiotics prescribed to her (gentamicin and cefditoren 200 mg) for two days. But when her complaints did not regress, she came to the service. In her tests, the white blood cell count was 6.5 (4.0-10.0 $10^3/\text{mm}^3$), Hemoglobin: 12.1 (11.5-16.0 g/dl), hematocrit: 37.1 (37-43%), serum reactive protein: 6.38 (0.00-0.800 mg/dL), and TIT: leukocyte esterase (LE) +++ and her biochemical tests were considered normal. She had a normal sinus rhythm in her electrocardiograph with a speed of 102 and there was not any ST-T change. Her troponin I level was also normal. After the initial diagnosis of gloves and socks syndrome, a consultation was requested from the infectious diseases department. The patient was then bedded in the infectious diseases department. When the B19 IgM Positive: 1.219 (<0.572) and parvovirus B19 IgG Negative: 0.419 (<0.402) was observed, the etiology determined to be an acute parvovirus infection. The patient was diagnosed with parvovirus B19-related papular purpuric gloves and socks

syndrome and she was discharged when her complaints were gone and after a symptomatic treatment.

Discussion

There is a spectrum of clinical conditions caused by parvovirus B19. The most apparent clinical signs are erythema infectiosum, arthritis and arthralgia, intrauterine infection, and hydrops fetalis. It is a persistent infection involving temporary aplastic crises in patients with hemolytic disease and chronic anemia in patients with immune deficiency. Myocarditis, vasculitis, glomerulonephritis, and neurologic involvement are less frequently seen conditions.^[1,2,4] Parvovirus B19 infection has been observed as common in worldwide studies carried out in various countries.^[2] Erythema infectiosum is the most widely seen clinical symptom of B19 infection. It is seen more in children between 4 and 11 years of age. Suddenly emerging rashes is the first clinical symptom of erythema infectiosum. The rash is a diffuse erythema that occurs in thin papules grouped on the erythematous surface.^[5] Joint ailments such as arthritis and arthralgia are seen more in adults.^[1,2] Anthony D. et al. found that rashes were seen together with acute arthropathy accompanied by flu-like symptoms in females during a parvovirus B19 infection. They also found that arthritis symptoms were seen less in males than in females, and males had flu-like symptoms more often. Arthritis is mostly in the form of synovitis with a sudden onset, pain and rash. It is usually of a transient and self-limited character.^[6] Although our patient described pain in her joint regions, we did not find any sign of arthritis. However, fatigue, high fever, and gloves and socks type rashes on her hands and feet indicated that our patient had gloves and socks syndrome. This syndrome, which was first defined by Harms et al. in 1990, is characterized by symmetrical ede-



Figure 1. In view of the hands and feet macular petechial rash seen.

mas and erythemas on hands and feet that exhibit a gloves and socks distribution, which is accompanied by fever and oral lesions. However, its relationship with parvovirus B19 was not known until 1991.^[7] Systemic symptoms including exanthema, mucosal lesions, lymphadenopathy, mild fever, loss of appetite, and arthralgia are seen in PPGSS. Papular-purpuric lesions on hands and feet accompanied by painful and itchy symmetrical erythema and edema are its characteristics. Mucosal findings include petechia, pharyngeal erythema, swollen lips, and painful oral aphthous lesions.^[8] Vulvar edema and erythema as well as dysuria have also been described.^[9] Often lymphopenia and temporary anemia are seen in laboratory tests, with a less than often elevation in liver enzymes.^[8] We did not find any anemia, lymphopenia, or biochemical abnormality in our patient. This syndrome limits itself to a period of 7-14 days.

Although our patient did not have any chest pain, she had slight myocarditis, so we took her electrocardiograph. Sinus tachycardia was detected and Troponin I was requested and found to be negative. Patients with rashes and a toxic appearance should be questioned for chest pain, and their electrocardiographs should be taken with follow up appointments.

The specific laboratory diagnosis of parvovirus B19 can be made by using a B19 antibody, viral antigen, or viral DNA. However, B19 specific DNA count results can still turn out positive. It will be useful to test DNA amounts with a Real-Time PCR in patients with immune deficiency due to insufficient antibody response.^[10] In our case, a final diagnosis could be established based on the findings parvovirus B19 IgM Positive: 1.219 (<0.572) and parvovirus B19 IgG Negative: 0.419 (<0.402).

A specific antiviral treatment is not available for B19 infection. A symptomatic treatment is hardly required for erythema infectiosum. Most of the time, the disease cures itself without leaving any sequels. The use of aspirin or ibuprofen may be necessary in patients who complain from arthralgia

or arthritis.^[1,2] There is no vaccine to treat parvovirus B19, but research ongoing to find a treatment.^[1]

In conclusion, we presented a case to remind that childhood diseases can, although rarely, be seen in adults who present to emergency services with high fever and rashes.

Conflict of Interest

The authors declare that there is no potential conflicts of interest.

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