

A case of orf (ecthyma contagiosum) with multiple lesions

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Abstract

Orf, also known as ecthyma contagiosum or contagious pustular dermatitis, is a viral zoonotic disease resulting from the direct or indirect contact of damaged skin with infected animals. The causative microorganism is the orf virus, an epitheliotropic DNA virus from the Parapoxvirus group, which generally infects sheep, goats, and various other domestic and wild ovine animals. A male patient presented to our outpatient clinic with multiple nodular lesions on his right wrist after incurring an injury during ovine slaughter. Diagnoses other than ecthyma contagiosum were eliminated by punch biopsy. Orf generally manifests as solitary lesions on hands and fingers, but it may rarely present as multiple nodular lesions. Here we present the case of a 42-year-old man diagnosed with orf based on clinical and histopathological findings.

Keywords: Orf, Ecthyma contagiosum, Ovine slaughter.

Introduction

Orf (ecthyma contagiosum) is considered an uncommon zoonotic viral infection caused by a Parapox virus, which results in ulcerative stomatitis in mainly sheep and goats.¹ The disease may be transmitted to humans by direct or indirect contact of damaged skin with infected animals. Indirect infections through contaminated knives or meat have also been reported. The causative agent is an epitheliotropic DNA virus from the Parapox virus family and affects sheep, goats and a few other domestic or wild ruminants. Although orf is usually found as solitary lesions on the hands and fingers, it has also rarely been reported on the face, nostrils, tongue, eyelids and perianal region, and can present as multiple lesions. A case of a 42-year-old male patient, who had multiple orf lesions after contact with sheep, is presented herein.

Case Report

A 42-year-old man presented to our clinic with lesions on his right hand that first appeared after he incurred an injury while engaged in an ovine slaughter. The lesions

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Figure: Multiple orf lesions on the left wrist.

were first observed approximately 10 days previously. During this period, the lesions had grown and evolved into mildly oozing, bright, erythematous nodules with impetiginous margins. The patient had no subjective complaints and was otherwise healthy. Dermatological examination revealed multiple oedematous, tumefactive nodular lesions that had smooth margins and were 4-15 mm in diameter with surrounding erythema and partial crusting on the flexor side of the right wrist (Figure). Gram staining, Giemsa smear preparations, and wound culture failed to reveal evidence of a pathologic microorganism.

Histopathological examination showed partial cytoplasmic vacuolisation, and several cells with eosinophilic cytoplasmic inclusions were observed in the stratum spinosum layer of the stratified squamous epithelium. Wet dressing and topical antibiotic cream treatment was administered, and the patient was asked to come for weekly follow-up visits. The lesions began to dry and shrink in the first week and had healed completely after 5 weeks.

Discussion

Orf (also known as ecthyma contagiosum or contagious pustular dermatitis) is primarily a disease of sheep and goats; man is infected on coming in contact with infected sheep or goats or with a fomite carrying the orf virus.¹ The first phase of the disease is characterised by the appearance of a small papule one week after the exposure. In the second phase, the lesions enlarge and

take on an iris-like shape with a central red nodule, a surrounding white circle and an erythematous exterior margin. In the third phase, the lesions enlarge rapidly and have an exudative appearance. The fourth phase is regeneration, when the lesion takes on black spots and exhibits a thin crust. The fifth phase is papillomatous, with very small papillomas that can be seen on the lesion. The last phase is regression. The papillomas shrink, the lesions flatten and thick crusts develop on the lesions. After the crust appears, the lesions heal rapidly. Regional lymphadenopathy, lymphangitis and fever may accompany the infection. Possible complications include erythema multiforme, a papulovesicular rash affecting the skin and mucosal surfaces, lenticular or maculopapular rashes, and lymphangitis. Post-orf mucous membrane pemphigoid and bullous pemphigoid cases have been reported in the literature.² The patient in our case presented without symptoms during the second phase of the disease. No complication occurred during the 2-month follow-up period.

Occupational disease occurs frequently in farmers, shepherds, veterinarians, butchers and meat industry workers, with the associated symptoms typically observed on the hands (95%). Orf epidemics in animals as well as related human infections are frequently seen during the spring and summer time. Lesions generally occur on the hands and fingers but can rarely occur on the face, nostrils, tongue, eyelids and perianal region.³

Contact with sheep or goats, a history of work in the slaughtering industry, clinical appearance and epidemiologic data are important for diagnosis. A definitive diagnosis requires detection of the virus in the lesion by electron microscopy, viral culture, histopathological examination of the biopsy material,

immunofluorescence antibody tests or other serological examinations.⁴

No specific therapy other than the treatment of symptoms is recommended, because orf lesions heal spontaneously and provide the patient with lifelong immunity. The lesion must be kept clean and the wound must be cared for appropriately. Local iodine application is reported to be beneficial, and antibiotic treatment is recommended if superinfection occurs. Recurrence may occur in patients with immune deficiencies or those who are undergoing corticosteroid or immunosuppressive therapy. Severe acanthosis or pseudoepitheliomatous hyperplasia can lead to the development of unusually large lesions which should be treated with electrocauterization, cryotherapy or surgical excision.⁵

Conclusion

As orf is a self-limiting disease, prompt diagnosis is of paramount importance to avoid inappropriate treatment and unwanted stress. Proper history taking is important to come to the diagnosis. Public awareness and preventive measures are highly recommended.

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