

The Difficulty in Diagnosis Orf Disease with Erythema Multiform

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ABSTRACT

Orf is a zoonotic disease and also known a sore mouth disease mostly affects sheep and goats and other animals. People can get it too if they have contact with infected animals, people and animals usually recover without long – term effects. The disease is caused by orf virus, a type of poxvirus. Lesions usually develop on the hands, around the mouth and can occur anywhere and resolve within (4-6) weeks without treatment. According to (CDC) Center for Disease Control and prevention, the disease is not transmitted from human to human.

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1- INTRODUCTION

Orf, also known as ecthyma contagiosum ,contagious pustular dermatitis infectious labial dermatitis, name orf was first identified orf as a contagious disease in sheep in 1890 and first described the disease in humans in 1934 [1]. Orf virus is a member of the Parapoxvirus, although sheep and goats are the most common sources of infection, and it is endemic in these herds worldwide but can be found in other ruminants and reindeer [2]. Human disease is most often seen in farmers, shepherds, veterinarians, and butchers, but anyone who has contact with sheep and goats is at risk [3]. Multiple cases of orf infection following the Muslim feast of the sacrifice (Eid al-Adha) [4]. According to the CDC, the disease is not transmitted from human to human. [1].

Clinical features:

Orf lesions usually develop on the hands, around the mouth, and can occur anywhere, orf lesions evolve through 6 clinical stages. A red macule appears a few days after inoculation and develops into a red papule by 1 week after the inoculation. The lesion develops into a targetoid nodule during the second week with a red papule enclosed by peripheral of erythema Fig (1). During third week, the acute stage starts, the lesion becomes weepy, table 1. It may appear as a flat-topped, crusted, hemorrhagic pustule 2 to 3 cm in diameter. During the fourth week, the lesion enters the regenerative stage, in this stage, it becomes dry and has black spots on its surface. During the fifth week, papilloma develops on the surface of the lesion. In the final clinical stage, number of crust appear at the periphery of the lesion and gradually extends centrally. The crust may shed and reform several times before the lesion flattens and heals. Lesions are typically painless [5,6,7].

Figure (1): A targetoid spot and papule surrounded by an enclosed peripheral halo of erythema



Table 1: Clinical manifestation of Orf Disease	
TIME AFTER EXPOSURE	CLINICAL MANIFESTATIONS
3-7 days	1-4 papules on hand (typically only 1 lesion): begin as a red maculopapular lesion ↓ Vesicle ↓
10-14 days	Target lesion with red center, white middle ring, and red halo ↓
14-21 days	Acute weeping stage ↓
21-28 days	Regenerative dry stage with black dot§ ↓
28-35 days	Papillomatous stage ↓
35 days	Regressive stage with dry crust and eventual shedding of the scab

Complications The lesions may complicate to secondary bacterial infection, but systemic complications may occur like maculopapular rash and generalized lymphadenopathy [8].

Bullous-pemphigoid-like eruptions giant orf lesions popular and Stevens-Johnson syndrome are rare complication [9]. Erythema multiform had been associated with Parapoxvirus infections and they are very rare complications of orf [10,11].

Diagnosis

- Clinical appearance and history of sheep or goat exposure are usually diagnostic and Dermo copy of orf lesions (the maculopapular and target stages,) [12].

- Special Tests: Reverse Transcriptase, which is a variation of the polymerase chain reaction (RT-PCR) testing, which is available through the centers for disease control and prevention (CDC), is the most rapid and accurate way to make the diagnosis when clinical uncertainty exists [13].

Clinical Course and Prognosis

Orf usually resolves within 4 to 6 weeks without treatment. Typically, scarring does not occur [14]. Recurrence is uncommon but has been reported [15].

Management

Treatment: Supportive care is the most appropriate intervention; antibiotic coverage may be appropriate if the secondary bacterial infection is suspected [1]. Antiviral therapy such as cidofovir topical cream or imiquimod topical jell immunomodulatory therapy [14].

Prevention: Barrier precautions, such as the wear gloves and good hand hygiene frequently, help prevent orf infection, should be particularly vigilant about avoiding contact with infected animals or potential fomites [1].

2- METHEDOLOGY AND RESULTS

In April 2019, a 35-year-old female, came to the Al-Muthanna Primary Health Care Center with no past medical history, one week after the contact with feet and head of dead sheep manipulated to prepare the " Pacha" dish - a popular dish in Iraq, presented with an ulcer on her middle part of the index of the right hand(fig.2), she had a low-grade fever and a painful finger ulcer, itching, redness, and swelling on both hands. She mentioned that the ulcerative lesion was induced by a medical assistant person who diagnosed the lesion as a small abscess so opened the nodule, then ulcerated about three days after. Macular rash, multiple target-shaped papules, and plaques presented with different sizes on the dorsum and palm of both hands, gradually progressed during 1 weeks then. Our recommended for a differential diagnosis in patients who have a history of working or contact with animals and to take over a national educational program in order to decrease the incidence of the disease.

Figure (2):

Ulcerated Orf lesion on the index and maculopapular rash (Target-shaped lesion) of the right hand



Figure (3): maculopapular rashes on the left hand



Figure (4): maculopapular rashes on (Target-shaped lesions) the left and right palm of the hands



Diagnosing with Orf disease complicated to erythema multiform, depending on the case history, if there is evidence for patient contact with carrier animals as sheep or goat and physical examination that concomitant with erythema multiform as a complication of this case .

She has been treated with an antihistamine tab 4 mg 3 times/day and hydrocortisone vial 100 mg 1-time I.M. /day for 2 days, for 8 days the lesions disappear gradually.

Figure (5): Improvement of skin lesions after 1 week of treatment



3- CONCLUSION AND RECOMMENDATION

As mentioned, that Orf infection spreads rapidly through the flock, with most animals becoming infected within a few weeks. People can get it by direct contact with sheep, goats, or fomites that are infected with the virus. In immunocompromised people, Orf is typically a benign, self-limiting illness that goes away in 3-6 weeks. It has the potential to be quite dangerous and forward-thinking. Wearing disposable gloves is advised for person handling infected animals in order to avoid self-infection and cross-contamination. In cases where there is a possibility of misdiagnosis with other, more serious conditions, a veterinarian has to be consulted.

Orf is a zoonotic disease, so this disease should be handled with care and caution for the public should be informed about this disease and the ways of their prevention, Protection of this disease is very simple, gloves should be worn to avoid spread virus of lesions, when female preparing "Pacha dish".

Continues medical education (CME) is very important for the doctor to improve their knowledge to reach proper diagnosis and management.

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صعوبة تشخيص مرض أورف عند تداخله مع التهاب الجلد الإحمراري المتعدد الأشكال

الخلاصة

يعد مرض أورف من الأمراض الإنتقالية التي تنشأ في الحيوانات ويعرف أيضا بمرض التهاب الفم, وغالبا ما يصيب الاغنام والماعز وبعض الحيوانات الاخرى. ويمكن ان ينتقل من الحيوان الى الإنسان في حالة وجود تماس مع الحيوانات المصابة, وعادة ما يتعافى الاشخاص والحيوانات المصابة دون اثار طويلة الامد. يحدث هذا المرض بسبب فايروس وهو نوع من انواع فيروس الجدري. تتطور الافات عادة على اليدين وحول الفم ويمكن ان تحدث في اي مكان من الجسم وتختفي خلال (4-6) اسابيع دون علاج, حسب ما ذكر في تعليمات مركز السيطرة على الامراض الإنتقالية وكيفية الوقاية منها. كما وجد بأن هذا المرض لا يمكن أن ينتقل من انسان الى اخر.