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BRIEF REPORT

Orf: Report of eleven cases in five Iranian families

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ABSTRACT

Background: Parapox virus is the causative agent of Orf disease which is basically seen in sheep and goats. It can be transferred to the human by direct contact with infected animals or indirect contact to infected meat or contaminated butchery instruments like knife. The skin lesions are usually found in fingers.

Patients: Totally, 11 subjects from five families infected with Orf disease were surveyed. The diagnosis was verified on clinical manifestations and pathological changes. Local antiseptic (betadin) and tetracycline ointment were administered for all patients, however, 3 cases were treated with oral antibiotic. No disseminated signs or complications have been reported and patients cured in the third (6 cases) or forth week (5 cases). Little scars were noted in 3 cases after one month follow up.

Conclusion: If there is a similar lesion in the members of a family, one should notice the background of epidemiological and clinical manifestations. Despite the rarity of Orf disease, its spread still exists in urban families, therefore, it is essential to wear gloves at the time of touching meat to prevent infection.

Keywords: *Orf, Parapox virus, Direct contact.*
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INTRODUCTION

Parapox virus is the infectious agent causing Orf or Ecthyma contagiosum disease. Orf is a widespread occupational disease in the veterinarians, cattlemen and shepherds. Its incubation period is less than 10 days. Usually the lesions are at the end of the fingers. Disease can be studied in five stages; firstly, the maculopapular lesion will be seen, then it will be change into target like (figure 1) and the dense secretions will come out, after that the nodule will form, that its surface gradually will become irregular and finely it will improve (1). The lesion maybe painful in the first stages and the complications of disease are the second bacterial infection, erythema multiform and widespread pustules (2). It is rare in the urban population, however, outbreaks have been described among Muslims during slaughtering sheep in the Ghorban feast.

The diagnosis of Orf is verified on the epidemiologic evidences including previous contact with contaminated animals or animal products and clinical manifestations, however, the diagnosis is confirmed by pathologic findings (figure 2) (3,4). Orf is more common among high risk groups, however, since the disease cures spontaneously most of the sufferers may not seek medical health. These high risk groups include cattlemen, shepherds, butchers and the

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slaughterhouses workers, of whom 22-29% are infected with Orf (5).

Usually, there is a benign lesion on the hand that improves without a considerable scar, however, in some cases, especially those with immunologic dysfunction, the lesion may be large or frequent relapses could be observed for which local antiviral or cryotherapy is prescribed (6,7).

Figure1. Target shaped erythematous popular skin lesion in a patient with Orf disease.

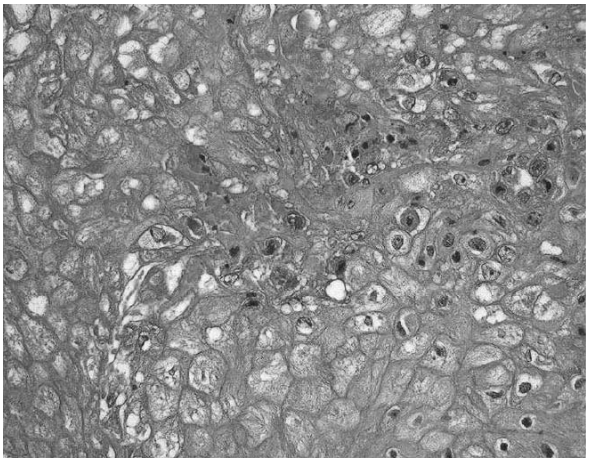

Figure 2. The presence of cytoplasmic and intranuclear eosinophilic inclusions of vacuolized epidermal cells

PATIENTS

Five families of a factory employees who had cutaneous lesions were investigated. Based on the clinical manifestations and pathological examination, the diagnosis of Orf was confirmed. The pathologic findings include vacuolization of cells in one third of over malpigy layer that cause vesicular formations besides eosinophilic nuclear inclusion and reteridges elongation in the epidermis as well as some dilated capillaries and infiltration of mononuclear cells in dermis. It was clear that the factory employees took the newly contaminated meat with Orf virus to their home. All those family members who touched the contaminated meat were clinically examined, of whom a total of 11 subjects were infected. None of the sufferers had used gloves during cutting or touching meat.

The study population included 6 males and 5 females with their age ranged 9-50 years. There were previous ulcers in 8 patients while two of them cut their fingers during preparing the meat and one did not have an evident ulcer. Incubation period was different from less than one day to five days, but in most of the cases cutaneous lesions appeared in the third (5 cases) or forth day (3 cases). All lesions were on the hands and in most of the cases the lesion was on fingers.

During the early stages, 5 cases had painful lesions and one case presented with edema around the lesion. Local antiseptic (betadin) and tetracycline ointment were administered for all patients, however, 3 cases were treated with oral antibiotic because of pain and probable secondary bacterial infection. No disseminated signs or complications have been reported and patients cured in the third (6 cases) or forth week (5 cases). Little scars were noted in 3 cases after one month follow up.

DISCUSSION

In a survey in Turkey, from nine human cases suffering from Orf in whom the lesions were in their hands, 3 were teachers and 6 were housewives who got the illness from sacrificed sheep meet. During Ghorban feast ceremony in the suburb of Paris, Turkish family including father and mother got the Orf lesion in their hands after slaughtering sheep and cutting meat, and also one of their

friends who helped slaughtering got the disease (2). In our study, the disease was transferred to other members of the family who touched the meat. Although Orf is a rare entity among urban population, it should be noted as a differential diagnosis in patients presenting with hand lesions (8). In our patients, the lesions were appeared after touching newly slaughtering, contaminated sheep meat. To get the infection, one must have a wound or cut his/her hand with knife during chopping meat, thus, wearing gloves and covering wounds when preparing meat is the main step to prevent disease transmission.

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