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PHOTO OUIZ

A butcher presented with a large bulla on his thumb

Behrooz Barikbin, Zahra Ghourchian
Skin Research Centre, Shaheed Beheshti Medical University, Tehran, Iran

CASE SUMMARY

A healthy 42–year Old Iranian man who was a butcher presented with a 3 days history of a large bullous lesion on his right thumb. (Figure 1)

He had a history of cutting his hand during meat slicing about 10 days ago. On physical examination there was a large 4×5 cm diameter bulla adjacent to a 2×2 cm targetoid nodule.

He had no significant past medical history. There was no history of traveling to rural area and no history of any insect bite. The findings of physical examination were unremarkable except for the aforementioned skin lesion.

The skin lesion resolved without any scar formation within 3 weeks after its appearance with aspiration of the bulla and topical treatment with an antiseptic solution and zinc oxide ointment.

For confirming the diagnosis a skin biopsy was ordered and a histopathologic section of the lesion has been shown in figure 2.

What is the diagnosis? (The answer is on *page 209*)

Figure 1. *Bullous lesion on the right thumb*

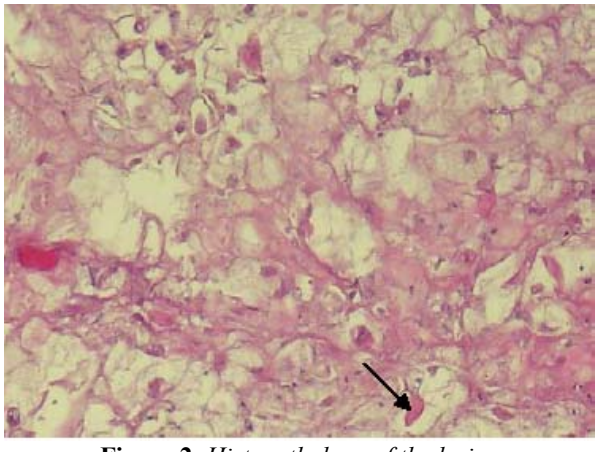

Figure 2. *Histopathology of the lesion*

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Reprint or Correspondence: Behrooz Barikbin, MD.
Skin Research Centre, Loghman-Hakim Hospital, Shaheed Beheshti Medical University.
E-mail: bbarikbin@yahoo.com

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ANSWER TO PHOTO OUIZ

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DIAGNOSIS: Orf

Orf, also known as ecthyma contagiosum, contagious pustular dermatosis, sheep pox, and infectious labial dermatitis is an infection caused by a pox virus (1). The pox virus family consists of DNA viruses that can infect animals or human beings. They are brick- or oval–shaped and are generally large enough to be seen with light microscopy. The skin is the portal of entry for most poxviruses and their infections are generally acute and self-limited (2). It is a common disease in goat and sheep-farming regions throughout the world.

Humans become infected by contact with infected lesions on animals or by fomites, such as barn doors, fences, etc; however, person-to-person transmission is rare (2).

The cutaneous lesions of orf are usually solitary and occur on the hands, fingers or face. Lesions are usually 2 to 3 cm in diameter and present after an incubation period of 5 to 6 days. Characteristically, lesions evolve through six stages lasting approximately 6 days each. The sequential stages include the clinical progression of a slightly elevated, erythematous papule into target lesion that presents as a nodule with a white middle ring containing a red center and periphery.

The acute weeping stage describes the rapidly growing, elevated phase. The regenerative, dry stage is accompanied by the appearance of black dots over the surface of the nodule. Small papillomas develop over the nodule during this papillomatous stage. During the regressive stage the formation of a dry crust and scab develop with resolution and no resultant scar formation (3).

The diagnosis of orf usually rests on the clinical history of direct or indirect contact with infected sheep, the appearance of the lesion and supporting laboratory investigations.

It must be differentiated from cowpox, herpetic withlow, atypical mycobacterial infection and pyogenic granuloma. The histological features are generally sufficiently distinctive to differentiate these possibilities (figure 1)(4).

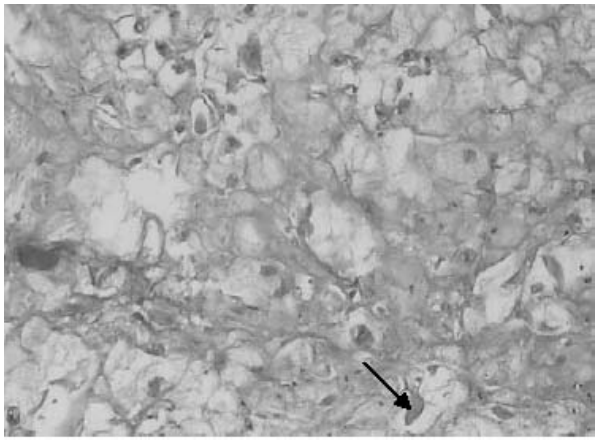

Figure 1. *Vacuolated superficial epidermis with inclusion bodies that are predominantly intracytoplasmic, occasionally intranuclear*

The most satisfactory confirmation is to demonstrate typical viral particles in crust or suspension under the electron microscope. The complement fixing, neutralizing and agglutinating antibodies which have been described have often epidemiological significance (5). No treatment is available for this infection, but it is a self-limited illness. The use of 40% idoxuridine has been

claimed to shorten the duration of the lesions, and cidofovir has recently been reported to induce regression (4,6).

Infection confers lasting immunity but there is no cross-immunity for other poxvirus infections (2).

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