



Orf

Orf is a viral disease that is widespread in sheep and goats. Orf can be transmitted to humans by contact with an infected animal or contaminated fomites. Reindeer have also caused similar lesions in humans. Orf is frequently seen in farming communities [1](#), [2](#) and meat handlers. Clinically, reddish weeping nodules of orf are seen on the dorsa of the hands and the fingers

that heal spontaneously in approximately 35 days

A related Medscape CME article is [Companion Animals and Human Health: Part II -- Zoonotic Diseases](#)

Orf is primarily a disease involving the skin, though the lymph nodes are occasionally involved.

A higher frequency of orf reports has occurred from Europe and New Zealand compared with North America, but this is of unknown significance.

The natural course of orf is spontaneous recovery in 3-6 weeks.

- Immunocompromised patients with orf can have progressive, destructive lesions requiring medical interventions such as antiviral therapy and surgical debridement. However, reports exist of immunosuppressed individuals with large, fungating lesions that have been refractory to treatment.
- Mortality from orf has not been reported.

Orf has been reported exclusively in whites.

No sexual predilection is reported for orf.

No age predilection is described for orf.

- Orf usually appears as a small papule on the dorsum of the index finger 1 week following contact with an infected animal or contaminated fomite.
- With orf, a low-grade fever may occur but usually subsides within 3-4 days.

Orf appears as a solitary lesion or as a few lesions on the fingers, the hands, or the forearms, and orf has even been reported on the face. ³ The orf lesion starts as a small, firm, red-to-blue papule that grows to form a hemorrhagic, flat-topped pustule or bulla. The bulla may have a crust in its umbilicated center. The fully developed orf lesion is typically 2-3 cm in diameter, but it may reach 5 cm. It is often tender and may bleed easily.

- Regional adenitis and/or mild lymphangitis may be found.
- Mild fever and malaise may be associated with orf.
- Large, fungating orf lesions have been reported in patients who are immunosuppressed and in patients with atopic dermatitis.
- The orf infection goes through 6 clinical stages, each lasting about 1 week.
- Stage 1 (maculopapular) - A red elevated lesion
- Stage 2 (targetoid) - A bulla with an irislike configuration (nodule with a red center, a white middle ring, and a red periphery)
- Stage 3 (acute) - A weeping nodule
- Stage 4 (regenerative) - A firm nodule covered by a thin crust through which black dots are seen
- Stage 5 (papillomatous) - Small papillomas appearing over the surface
- Stage 6 (regressive) - A thick crust covering the resolving elevation

Orf is caused by infection with the orf virus that belongs to the Parapoxvirus genus, which also includes the milker's nodule virus. ⁴ Parapoxvirus is a member of the family Poxviridae, which contains double-stranded DNA viruses known to be the largest viruses.

- The orf virus is a cylindrical virus measuring 260 X160 nm. Its surface tubules form a long crisscross design that is seen on negatively stained preparations by electron microscopy. This virus resists physical damage and persists through the winter months on hedges, feeding troughs, and barns.
- Orf is transmitted by direct contact inoculation. Humans acquire the infection from contact with infected animals, carcasses, or contaminated, nonliving material. Orf is very common among shepherds, veterinary surgeons, and farmers' wives who bottle-feed young lambs, as well as in butchers and meat porters from handling infected carcasses.
- No transmission of orf occurs to cattle, and no human-to-human transmission occurs.

Treatment

Although orf is a self-limited disease, symptomatic treatment with moist dressings, local antiseptics, and finger immobilization is helpful. Secondary bacterial infection from orf is not uncommon and must be treated with topical or systemic antibiotics. Several reports describe complicated orf cases of orf successfully treated with topical imiquimod, resulting in rapid regression of the lesions. [10](#) , [11](#) , [12](#) Reports also describe promising results in treating orf lesions with cidofovir cream. [13](#) , [14](#)

- For large exophytic orf lesions, dissection from the underlying dermis is performed. [15](#) If an orf lesion is persistent, curettage and electrodesiccation may be curative. Shave excision is another procedure used to treat orf lesions. Cryotherapy (liquid nitrogen) has been reported to speed up the recovery process from orf treatment.

[16](#)

,
[17](#)

Radiation or amputation must be avoided.