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## The re-emerging of orf virus infection: A call for surveillance, vaccination and effective control measures

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### Abstract

Orf disease is known to be enzootic among small ruminants in Asia, Africa, and some other parts of the world. The disease caused by orf virus is highly contagious among small ruminant species. Unfortunately, it has been neglected for decades because of the general belief that it only causes a self-limiting disease. On the other hand, in the past it has been reported to cause huge cumulative financial losses in livestock farming. Orf disease is characterized by localized proliferative and persistent skin nodule lesions that can be classified into three forms: generalized, labial and mammary or genitals. It can manifest as benign or malignant types. The later type of orf can remain persistent, often fatal and usually causes a serious outbreak among small ruminant population. Morbidity and mortality rates of orf are higher especially in newly infected kids and lambs. Application of antibiotics together with antipyretic and/or analgesic is highly recommended as a supportive disease management strategy for prevention of subsequent secondary microbial invasion. The presence of various exotic orf virus strains of different origin has been reported in many countries mostly due to poorly controlled cross-border virus transmission. There have been several efforts to develop orf virus vaccines and it was with variable success. The use of conventional vaccines to control orf is a debatable topic due to the concern of short term immunity development. Following re-infection in previously vaccinated animals, it is uncommon to observe the farms involved to experience rapid virus spread and disease outbreak. Meanwhile, cases of zoonosis from infected animals to animal handler are not uncommon. Despite failures to contain the spread of orf virus by the use of conventional vaccines, vaccination of animals with live orf virus is still considered as one of the best choice. The review herein described pertinent issues with regard to the development and use of potential effective vaccines as a control measure against orf virus infection.

**Keywords:** Orf Virus; Re-emerging; Immune response; Surveillance; Vaccine and vaccination

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