

Communication

Orf infection following ear tagging in goats

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Ceci est la première description de l'ecthyma contagieux chez la chèvre consécutif à la mise en place de boucle à l'oreille. Les lésions classiques ont été observées chez les chèvres atteintes et le virus a été ré-isolé et identifié à partir d'elles. Il faut garder à l'esprit la menace de cette affection, occasionnée par la mise en place d'une boucle à l'oreille, dans les régions où l'ecthyma contagieux sévit de façon endémique. *Mots clés* : Chèvre - Ecthyma contagieux - Arabie Saoudite.

Introduction

Orf is a world-wide disease of sheep and goats (5). It is caused by a parapoxvirus of the family poxviridae (2). The virus is highly epitheliotropic (1). The main sites of infection in the affected animals are the lips and nostrils. Spread to other parts of the body is not frequent, however lesions are seen at locations such as the gums, perineal skin, udder and tail (5). The virus gains access into tissues through abrasions or wounds.

Orf infection in sheep and goat in Saudi Arabia is widespread (3).

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In the present communication, we describe the first recording of orf infection involving the ears following ear-tagging in goats.

Materials and Methods

Two newly ear-tagged six-month old orf-seronegative indigenous goats were housed with two sheep and two goats, which had been experimentally infected with the orf virus ten days before. The animals were observed daily for symptoms. Feed and water were provided *ab lib*.

Results

On day 16 post exposure the ear-tagged goats started to show papules around the edges of the holes made by the metal punch (photos 1, 2). The papules enlarged and the area became thick. A week later the lesions became nodular and very hard, and scabs appeared. The goats were otherwise clinically normal. At this stage, scabs were collected in sterile bottles and the virus was identified using the complement fixation (CF) (6) and the agar gel immunodiffusion (AGID) (8) tests, employing a reference orf antiserum supplied by CRVL Weybridge (Surrey, England). The scab material was also made into 10 % suspension and inoculated into lamb testicle cell culture as described by PLOWRIGHT *et al.* (4).

The scab virus gave a line of complete identity against the reference orf antiserum. The cell culture showed cell rounding by day 6 and complete detachment of the monolayer was observed by day 12 post-inoculation. The isolated virus was concentrated 25 times, using polyethylene glycol (PEG-BDH, England) and was reacted against the reference orf antiserum using AGID and CF tests as above. It gave a complete line of identity with the AGID test ; and was positive with the CFT test. A similarly concentrated non-inoculated cell culture did not give line with AGID and were negative with CFT.



Photos 1, 2 : Orf lesion around the hole made by the tag on the goat's ear.

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Discussion

Orf virus tropism is highly epitheliotropic, and lesions are usually associated with the lips and nostrils. The involvement of other parts of the body has been less frequently described.

However, only one report describing ear infection of sheep by the orf virus following ear-tagging was published so far (1). Our present paper describes the first record of orf tag infection in goats. The results confirm that ear-tagging could be an efficient port of entry for the orf virus and for a subsequent development of infection.

The scab material from the infected goats yielded enough virus material to be detected with AGID and CFT tests against the reference orf antiserum. Further confirmation was also made by isolation of the virus in cell culture and its serological identification using the AGID and CFT tests.

Though ear-tagging is not a common practice in Saudi Arabia, we consider that it might represent a risk of orf virus dissemination among sheep and goats.

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This communication describes the first record of orf infection in goats following ear-tagging. Typical orf lesions were observed in the affected goats, and the virus was reisolated and identified from them. The threat of orf infection following ear-tagging should be kept in mind in orf-endemic regions. *Key words* : Goat - Orf infection - Saudi Arabia.

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