what's your diagnosis?

Rapidly growing cutaneous nodules in a sheep worker

Monica Garcia-Arpa, Lucia Gonzalez-Ruiz, Luis Gomez-Sanchez, Marcos Carmona-Rodriguez

From the Department of Dermatology, Hospital General de Ciudad Real, Castilla-La Mancha, Spain

Correspondence: Monica Garcia-Arpa, Department of Dermatology, Hospital General de Ciudad Real, Avda. Obispo Torija s/n Ciudad Real, 13005 Spain mgarciaa73@yahoo.es ORCID: https://orcid.org/0000-0003-2714-9799

Citation: Garcia-Arpa M, Gonzalez-Ruiz L, Gomez-Sanchez L, Carmona-Rodriguez M. What's Your Diagnosis? Rapidly growing cutaneous nodules in a sheep worker. Ann Saudi Med 2020: 40(1); 63-65. DOI: 10.5144/0256-4947.2020.63

Received: June 25, 2019

Accepted: August 3, 2019

Published: February 6, 2020

Funding: None.

A healthy 22-year-old male, presented with two tender nodules on his right middle finger and right forearm. They had appeared five days earlier as erythematous macules and were growing rapidly. Examination revealed two ulcerated nodules **(Figure 1).** He was afebrile and systemic symptoms were absent. A biopsy revealed focal necrosis of the epidermis with neutrophils and an extensive lymphohistiocytic infiltrate in the dermis with some red intracytoplasmic inclusions **(Figure 2).** CD30 stain revealed infiltration by reactive lymphocytes **(Figure 3).** Microbiological cultures from biopsy for bacterial, mycobacterial and fungi and PCR for leishmaniasis were negative. Suspecting an infection, we asked him about his occupation. He milked sheep mechanically.

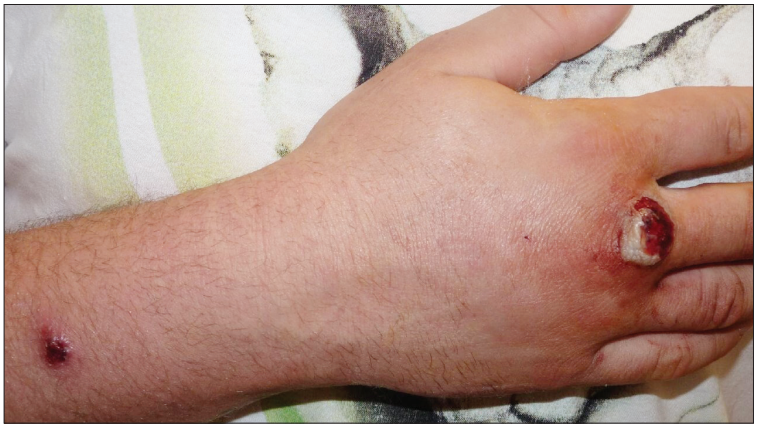

Figure 1. A 2-cm diameter erythematous and exophytic nodule with ulceration on his right middle finge , with surrounding edema. Another 0.8-cm ulcerated nodule is present on his forearm.

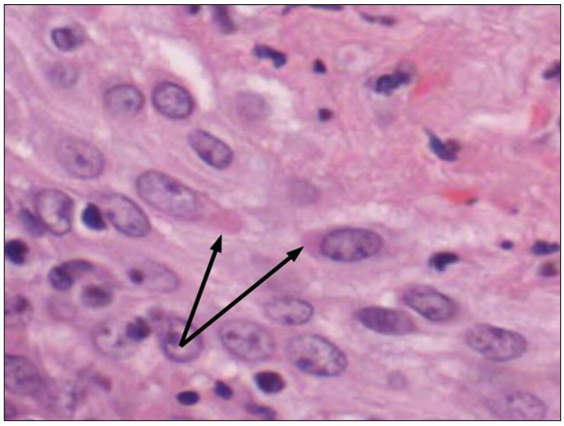

Figure 2. Cutaneous biopsy (from finger) eveals large intracytoplasmic eosinophilic inclusions within the keratinocytes in some cells (arrows) (Hematoxylin-eosin stain, ×400).

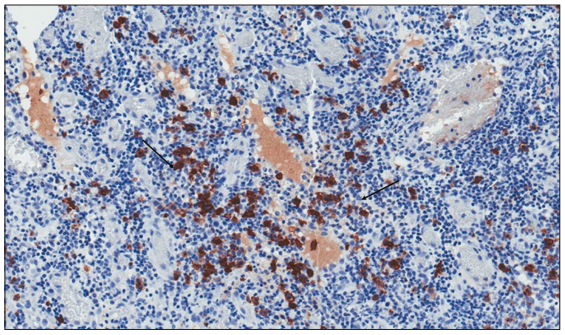

Figure 3. Marked reactive lymphoid infiltrate with CD3 positive T cells (arrows) (CD 30 stain, ×200).

Answer: Orf virus infection

Monica Garcia-Arpa, Lucia Gonzalez-Ruiz, Luis Gomez-Sanchez, Marcos Carmona-Rodriguez

From the Department of Dermatology, Hospital General de Ciudad Real, Castilla-La Mancha, Spain

Correspondence: Monica Garcia-Arpa · Department of Dermatology, Hospital General de Ciudad Real, Avda. Obispo Torija s/n Ciudad Real, 13005 Spain · mgarciaa73@yahoo.es · ORCID: https://orcid.org/0000-0003-2714-9799

Citation: Garcia-Arpa M, Gonzalez-Ruiz L, Gomez-Sanchez L, Carmona-Rodriguez M. What's Your Diagnosis? Rapidly growing cutaneous nodules in a sheep worker. Ann Saudi Med 2020: 40(1); 63-65. DOI: 10.5144/0256-4947.2020.63

Received: June 25, 2019

Accepted: August 3, 2019

Published: February 6, 2020

Funding: None.

Contagious ecthyma, also known as Orf nodule or disease in humans, is a viral zoonotic disease.[1] It primarily occurs in sheep and goats worldwide, as exudative lesions typically located in the oral region, nostrils, eyelids, udder and teats. Humans, especially persons exposed in the workplace, are infected through direct contact with animals or contaminated fomites. After an incubation period of 3-8 days, orf progresses through six stages: initially a small erythematous macule appears that transforms into a papule, which progresses continuously into a nodular, and often vesicular, targeted lesion. The nodule ulcerates and resolves spontaneously within 3-6 weeks. Constitutional symptoms, lymphadenopathy, superinfection and immune hypersensitivity reactions are uncommon.[1-4]

Microscopically, the parapoxvirus infection is characterized by the presence of eosinophilic inclusion bodies in the cytoplasm of vacuolated epidermal cells in the upper epidermis. A marked reactive lymphoid infiltrate with CD30 positive T cells may be present.[4] Electron microscopy reveals numerous viral particles and PCR can definitively identify orf virus.[1,3] However, in general, the diagnosis of Orf disease is based on the history, physical examination and clinical evolution of the patient.

Differential diagnoses include rapidly growing cutaneous tumors in fi - gers and hands, as pyogenic granuloma, keratoacanthoma, nodular melanoma, cutaneous lymphoma, Merkel cell carcinoma and cutaneous metastasis. Moreover, various cutaneous infections (cutaneous anthrax, tularemia, erysipeloid, sporotrichosis, leishmaniasis and atypical mycobacterial infections) may have a similar presentation. Milker's nodules have identical clinical manifestations and histopathology. However, the epidemiological context is different as milker's nodules is caused by a bovine origin parapoxvirus, while orf is of caprinic origin parapoxvirus.

Orf does not require specific treatment, because it shows spontaneous regression within 4–8 weeks. Nevertheless, local antiseptic treatment is recommended to prevent bacterial super-infection. Diagnosis of orf disease is mostly based on the history of animal contact and clinical findings in a patient with single or multiple erythematous nodules growing rapidly on the fingers

REFERENCES

1. Zink A, Pichlmeier A, Fischer T, Biedermann T. Rapidly growing nodule on the finger of a 20-year-old woman: A Quiz. Acta Derm Venereol. 2018;98(4):469-70.
2. Meier R, Sommacal A, Stahel A, Grünert J, Hoffmann M. Orf - an orphan disease? JRSM Open. 15;6(6):2054270415593718.
3. Sarma DP, Cox M, Walter P, Crisler W, Huerter C. A man with an umbilicated papule of the hand: what is your diagnosis? Case Rep Med. 2010;2010:524021.
4. Jia QN, Qiao J, Fang K, Qu T. Image Gallery: Expression of CD30 in orf infection presenting as a giant targetoid erythematous nodule. Br J Dermatol. 2018;179 (3):e132.