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Multiple finger nodules and an erythematous rash

A case study

Keywords

skin diseases; infectious

Case study

A previously well male, 18 years of age, from a rural community, presented with three painful, itchy nodules on the fingers of his left hand, which had been present for 1 week. He had been prescribed amoxicillin clavulanate but presented again when there was no improvement after 4 days of taking antibiotics.

Examination revealed three erythematous and umbilicated nodules without any halo, but with a central depression with exudate (*Figure 1a*). No specific treatment was instituted at this visit.

One week later the patient re-presented with new erythematous lesions on the

palms and dorsum of his hands. The original three lesions had improved and were drier than previously (*Figure 1b, c*). The new lesions disappeared after 2 weeks and the original lesions after 4 weeks, without any other treatment.

Question 1

What is the most likely diagnosis?

Question 2

What is the aetiology of this condition?

Question 3

What population is at risk for this condition?

Question 4

What would be the most frequent complications expected in this clinical picture?

Question 5

What would be the appropriate management of this condition?



Figure 1. Finger nodules on presentation A) and 1 week later B) and C)

Answer 1

The most likely diagnosis is orf nodule, also known as ecthyma contagiosum, and erythema multiforme secondary to this infection. Most important differential diagnoses include Milker nodule.

Answer 2

Orf nodules are caused by a parapox virus subgroup of the poxvirus family. It is generally transmitted by direct contact with an infected sheep ('scabby mouth'). Milker nodules have a similar appearance and are caused by another parapox virus found in cattle. The clinical images of the nodules are the first key to diagnosis, then the epidemiological context (sheep or cattle exposure) can separate the two conditions. In this case, further specific questioning elicited the history of exposure to sheep.

Answer 3

Orf is an occupational disease among sheep farmers, veterinarians and abattoir workers.^{1–3} Patients usually do not present for medical care because they know the cause of the nodules and their self limiting nature. In contrast, there is a rural population without regular contact with livestock who may have contact with an infected sheep. They may not know of the infection and lesions and may be more likely to seek medical care, as in this case. It was only after diagnosis that the patient recalled and recognised the relevance of contact with sheep.

Answer 4

Severe systemic complications are uncommon. Fever, superinfection, erysipelas and lymphadenitis are the most frequent complications. Erythema multiforme, a hypersensitivity reaction in this case to the parapox virus, is a complication that may lead to seeking medical attention.^{1,4–6} Immunocompromised patients can develop very large and atypical orf lesions that do not always regress spontaneously and may recur.^{6,7}

Answer 5

Orf is a self limiting disease that generally resolves after about 3–4 weeks. This is in contrast to Milker nodule, which usually resolves in 5–6 weeks.⁸ Although severe systemic complications of orf are

uncommon, the lesions may be alarming. Once the diagnosis is made, the key is to explain the self limiting nature of the lesion and to reassure the patient. If initially an accurate diagnosis is not made, patient concern may increase as the lesions will not have improved after the prescribed treatment (frequently an antibiotic).¹

In the case of an immunocompromised patient, lesions may have a chronic evolution. It is then necessary to consider an active treatment with cryotherapy,⁹ surgical excision,¹⁰ interferon,¹¹ topical idoxuridine¹² or imiquimod cream.¹³

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References

1. Bassioulas K, Orfanidou A, Stergiopoulou CH, Hatzis J. Orf. Clinical and epidemiological study. *Australas J Dermatol* 1993;34:119–23.
2. Buchan J. Characteristics of orf in a farming community in mid-Wales. *BMJ* 1996;313:203–4.
3. Robinson AJ, Petersen GV. Orf virus infection of workers in the meat industry. *N Z Med J* 1983;96:81–5.
4. Gill MJ, Arlette J, Buchan KA, Barber K. Human orf. A diagnostic consideration? *Arch Dermatol* 1990;126:356–8.
5. Mendez B, Burnett JW. Orf. *Cutis* 1989;44:286–7.
6. Dermnet NZ. Erythema multiforme. Available at <http://dermnetnz.org/reactions/erythema-multiforme.html> [Accessed 8 June 2012].
7. Savage J, Black MM. 'Giant' orf of finger in a patient with a lymphoma. *Proc R Soc Med* 1972;65:766–8.
8. Dermnet NZ. Milker's nodules. Available at <http://dermnetnz.org/viral/milkers-nodules.html> [Accessed 8 June 2012].
9. Degraeve C, De Coninck A, Senneseael J, Roseeuw D. Recurrent contagious ecthyma (orf) in an immunocompromised host successfully treated with cryotherapy. *Dermatology* 1999;198:162–3.
10. Shelley WB, Shelley ED. Surgical treatment of farmyard pox. Orf, milker's nodules, bovine papular stomatitis pox. *Cutis* 1983;31:191–2.
11. Tan ST, Blake GB, Chambers S. Recurrent orf in

an immunocompromised host. *Br J Plast Surg* 1991;44:465–7.

12. Hunskaar S. A case of ecthyma contagiosum (human orf) treated with idoxuridine. *Dermatologica* 1984;168:207.
13. Erbagci Z, Erbagci I, Almila Tuncel A. Rapid improvement of human orf (ecthyma contagiosum) with topical imiquimod cream: report of four complicated cases. *J Dermatolog Treat* 2005;16:353–6.

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