

lymecycline (generic) capsule, measuring  $21 \times 7$  mm. Considering its size, we found it surprising that no available alternative preparations exist. Furthermore, we learnt that it is not advisable to crush or cut lymecycline capsules, as they are specially coated to shield the oesophagus from the caustic properties of the drug. This is particularly important to bear in mind when prescribing tetracyclines, as they have been implicated as one of the most common drugs causing pill-induced oesophagitis.<sup>3</sup> Soluble doxycycline (Vibramycin-D®) may be considered as a substitute tetracycline.

Ciclosporin (Dexamune®) was the second largest capsule. Neoral® 100 mg/mL oral solution is an alternative formulation. However, it is only available as a 50 mL bottle, with 1 mL being equivalent to 100 mg of the active ingredient, so unless patients have an established response to ciclosporin and require it long-term, this is not a cost-effective alternative.

The third largest capsule was (generic) isotretinoin. Although it is recommended that these are swallowed whole, in exceptional circumstances the gelatin shell can be cut open to release the liquid contents inside.<sup>4</sup> However, strict guidance must be followed on how to perform this safely.<sup>4</sup>

Of the remaining two of our five most commonly prescribed medications, the fourth largest was erythromycin (generic) gastroresistant tablets, and smallest was methotrexate. Both can be prescribed as a liquid for those with dysphagia, and methotrexate is also available in injectable forms.

Drug manufacturers have complete control over the shapes and sizes of pills.<sup>5</sup> Many factors influence the attributes of a pill; for example the more potent the drug the less is required, therefore the pill will be smaller. Size may also be effected by disintegrants, which are substances added to the active ingredient to allow for optimal enteric absorption.<sup>5</sup> Manufacturers may not always take into consideration how difficult it may be to swallow a medicine, and despite the average oesophagus being 20 mm in diameter, many pills are longer than 10 mm.<sup>5</sup> Alternative formulations, such as liquids, are often less cost-effective to produce.

Prescribers should be aware of the available alternative formulations for commonly used medications to increase compliance in patients with dysphagia. To ensure patient safety and effective drug administration, patients should be informed that it may not be safe to cut or crush a tablet if they find it difficult to swallow. Educating patients on how to swallow medications properly can also prevent complications. Ultimately, the main issue when considering administering a drug via a different route lies with the lack of readily available alternative formulations.

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## References

- 1 Sura L, Madhavan A, Carnaby G, Crary MA. Dysphagia in the elderly: management and nutritional considerations. *Clin Interv Aging* 2012; **7**: 287–98.
- 2 Holland G, Jayasekeran V, Pendleton N *et al*. Prevalence and symptom profiling of oropharyngeal dysphagia in a community dwelling of an elderly population: a self-reporting questionnaire survey. *Dis Esophagus* 2011; **24**: 476–80.
- 3 Zografos GN, Deorgiadou D, Thomas D, Kaltsas G. Drug-induced esophagitis. *Dis Esophagus* 2009; **22**: 633–7.
- 4 Parfitt K, Angelopoulos C. How to give isotretinoin to a child who cannot swallow capsules, 2002. Available at: <http://www.ouh.nhs.uk/patient-guide/leaflets/files/110214isotretinoin.pdf> (accessed 7 May 2017).
- 5 Center for Drug Evaluation and Research. Size, shape, and other physical attributes of generic tablets and capsules guidance for industry, 2015. Available at: <https://www.fda.gov/downloads/drugs/guidances/ucm377938.pdf> (accessed 13 May 2017).

## A case of gamasoidosis caused by *Dermanyssus gallinae*, misdiagnosed as delusional parasitosis

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Gamasoidosis is the infestation by nonburrowing, blood-sucking mites living on birds, including poultry. Although infrequent, it manifests as a widespread nonspecific itchy papular eruption that is difficult to diagnose unless mites are directly visualized.<sup>1</sup>

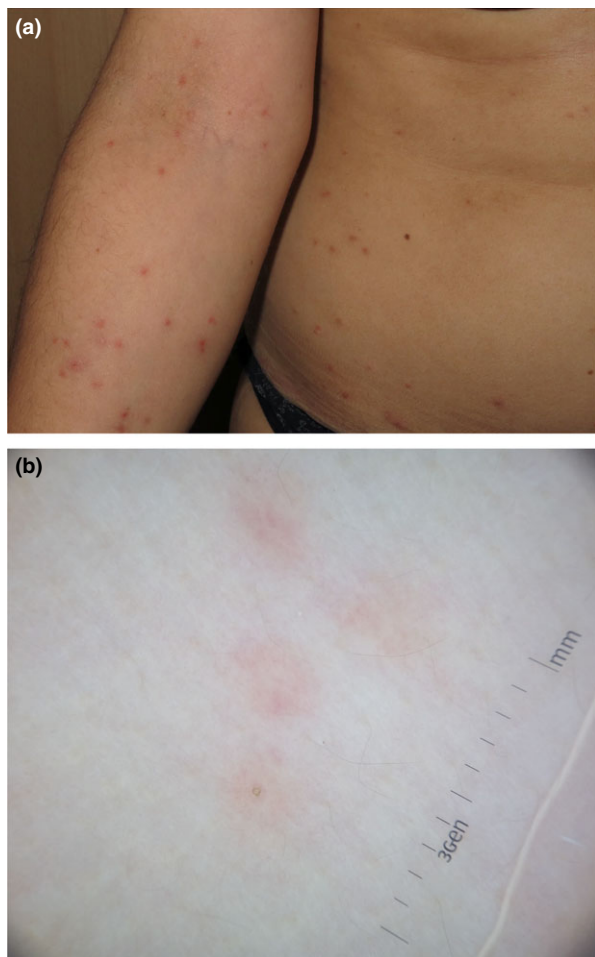
An otherwise healthy 40-year-old woman presented with a presumptive diagnosis of delusional parasitosis due to a 1-month history of widespread pruritic rash. She identified multiple 'bugs' moving daily on her walls, bed and through her body.

Physical examination revealed multiple papules on the patient's body; otherwise, findings were nonspecific (Fig. 1a). Dermoscopic evaluation of each lesion was unremarkable, and the delta sign was not found (Fig. 1b). The patient then produced a container with the suspected 'bugs', which was misinterpreted as a positive 'matchbox/specimen sign' and increased our suspicion that she had delusional parasitosis. Unexpectedly, however, after the container was opened, multiple, small, mobile mites

started to escape from it within seconds. Under dermoscopy, small (< 1 mm), fast-moving, silver-black mites with long frontal legs (Fig. 2) were seen, compatible with an avian mite and indicating gamasoidosis. Entomology examination confirmed the diagnosis of *Dermanyssus gallinae*. The patient recalled a colony of pigeon nests outside her home, and reported that mites entered freely through her window. She was treated with a 5-day course of systemic steroids and a single dose of oral ivermectin. Fumigation of her apartment resolved her home infestation, and she was symptom-free at follow-up. We did not investigate for *D. gallinae*-associated bacterial/viral coinfections.

*D. gallinae* or 'chicken mite' is a small mite that usually parasitizes birds (including chickens, parrots and pigeons, either wild or domestic).<sup>1</sup> The mite is usually black when unfed, but turns red after feeding. It may attack humans,

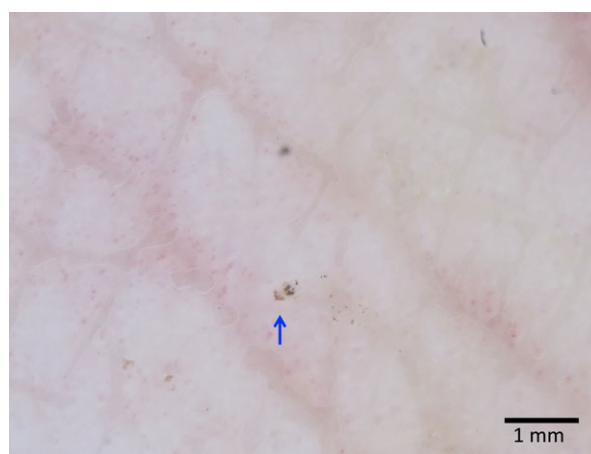
but cannot complete its life-cycle on the human body, displaying 'bite and run' behaviour.<sup>1</sup> Some authors have suggested including gamasoidosis as an emergent occupational disease in poultry workers and farmers, as > 80% of farms with laying hens in Europe are infested.<sup>2</sup> By contrast, human cases of gamasoidosis due to contact with pigeons have been anecdotally reported;<sup>3</sup> however, unpublished literature has shown that mites have become more prone to attack humans specifically, which is indicative of host expansion.<sup>4</sup> In addition, *D. gallinae* mites have been implicated as vectors of some bacteria such as *Pasteurella multocida* and *Coxiella burnetii*, and some types of viral encephalitis, highlighting the importance of recognizing this emerging disease.<sup>5</sup>



**Figure 1** (a) Multiple monomorphic erythematous papules on the patient. (b) Dermoscopic evaluation of a papule showed only nonspecific blanching erythema (original magnification  $\times 10$ ). Polarized light dermoscopy; image taken with a DermLite<sup>®</sup> DL3 dermatoscope attached to a Samsung<sup>®</sup> Galaxy S5 camera.



**Figure 2** Entodermoscopy findings. Multiple silver-black mites with long frontal legs attached to an adhesive tape (Polarized light dermoscopy. Original magnification  $10\times$ . Image taken with a DermLite DL3 dermatoscope attached to a Samsung Galaxy S5 camera).



**Figure 3** Entodermoscopy of a delta-sign found in scabies (blue arrow; polarized light dermoscopy. Original magnification  $10\times$ . Image taken with a DermLite DL3 dermatoscope attached to a Samsung Galaxy S5 camera).

**Table 1** Comparative table of delusional parasitosis and ectoparasitosis.

|                                                                                     | Delusions of parasitosis                                                                                                                                                                             | Ectoparasitosis                                                                                                                                                                                                               |
|-------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Epidemiology                                                                        | None                                                                                                                                                                                                 | Occurs in avian workers and those with living close to birds (e.g. pigeons) and their nests.<br>Immunosuppression, sexually transmitted diseases and overcrowding (specific for scabies) are risk factors                     |
| Clinical history                                                                    | Patient is convinced that they are infested with an organic parasite (e.g. mites, parasites, bacteria, worms, insects, viruses) or animate material.<br>This can be secondary to psychiatric disease | Normally parasites are not seen by patients. Patients are otherwise healthy. Other family members may report itch.                                                                                                            |
| Patient brings a container containing the culprit organism (matchbox/specimen sign) | Positive                                                                                                                                                                                             | Normally negative                                                                                                                                                                                                             |
| Physical examination                                                                | Localized or widespread excoriations in body areas available for scratching. Excoriations may have 'angulated' lines.                                                                                | Papules and/or vesicles. Gamasoidosis: especially in covered areas of the trunk and nuchal area. Scabies: especially the interdigital spaces, axillae and genitalia                                                           |
| Dermatoscopy                                                                        | Crusts, clothing fibres and soil, among others                                                                                                                                                       | Mites (if patients bring them, because they are usually not present on the patient's body). Furrows and delta sign in cases of scabies                                                                                        |
| Treatment                                                                           | Psychiatric evaluation and treatment, normally including antipsychotics                                                                                                                              | Gamasoidosis: symptomatic relief (i.e. pruritus) as the mite does not live in the human body; mechanical removal of mites (i.e. a bath) may be helpful; fumigation of living quarters. Scabies: permethrin/ivermectin mainly. |

Dermoscopy may reveal the nature of the specimens, such as clothing fibres instead of mites. Recognition of *Dermanyssus* spp. mites is helpful as the patient may bring common bugs from plants or soil that are not pathogenic to humans and should be excluded as the causative agent. It is important to highlight that usually at the time of consultation, mites are not seen on the body, so it is important to have a high index of suspicion when evaluating patients with generalized pruritus and directly asking about a history of bird contact, such as nests nearby. The clinical picture of this infestation can also be misdiagnosed as scabies; however, dermoscopy may also aid to exclude that diagnosis (Fig. 3). A comparison between delusions of parasitosis and ectoparasitosis is available in Table 1.

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## References

- Collgros H, Iglesias-Sancho M, Aldunce MJ *et al.* *Dermanyssus gallinae* (chicken mite): an underdiagnosed environmental infestation. *Clin Exp Dermatol* 2013; **38**: 374–7.

- Sparagano O, Pavličević A, Murano T *et al.* Prevalence and key figures for the poultry red mite *Dermanyssus gallinae* infections in poultry farm systems. *Exp Appl Acarol* 2009; **48**: 3–10.
- Haag-Wackernagel D, Bircher AJ. Ectoparasites from feral pigeons affecting humans. *Dermatology* 2010; **220**: 82–92.
- George DR, Finn RD, Graham KM *et al.* Should the poultry red mite *Dermanyssus gallinae* be of wider concern for veterinary and medical science? *Parasit Vectors* 2015; **8**: 178.
- Valiente Moro C, De Luna CJ, Tod A *et al.* The poultry red mite (*Dermanyssus gallinae*): a potential vector of pathogenic agents. *Exp Appl Acarol* 2009; **48**: 93–104.

## Mast cells of the nail in psoriasis: the tip of the iceberg?

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I read with great interest the report by Yamamoto and Mori<sup>1</sup> published recently in *Clinical and Experimental Dermatology*. The authors presented, for the first time, a case of an elderly Japanese patient with isolated nail psoriasis and a histopathological finding of epidermal mast cells. The authors provided their explanation of this finding, but did not discuss its possible value, regarding whether it has a clinical implication or might have an impact on the therapeutic plan, or is a mere clinical subtype of nail psoriasis.

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