In this issue Lalulu et al. report the spurious findings of dust mites in urine samples from two patients (1). They were originally mistaken for pubis lice, but upon referral to a parasitology laboratory were identified as dust mites. As only one specimen was found in both urine samples, and a further urine sample from one patient did not reveal dust mites, the authors conclude that the presence of these dust mites were most likely contaminants from the environment.

Dust mites were first reported in urine samples in the literature in 1953 (2). Infrequent reports of their presence in urine followed (3-7). The first comprehensive survey of dust mites in urine came from China where 3.46% of urine samples from 1,994 subjects were found to contain up to 17 different species of dust mites (8). This incidence of urinary acariasis was positively linked to individuals working in environmental occupations with high densities of dust mites, such as rice storehouses and mills.

The presence of a single or few dust mites in urine is most likely an artifact due to contamination of the specimen. Dust mites are ubiquitous in the environment. The presence of house dust mites in New Zealand were first reported in this journal by Brian Cornere who studied 22 dust samples from homes in Auckland (9). All dust specimens revealed the presence of the house dust mite, Dermatophagoides pteronyssinus along with a number of other dust mite species. He extended his study to other centers and confirmed D. pteronyssinus as the dominant house dust mite species in New Zealand (10). New Zealand has a very large density of house dust mites in the indoor environment as evidenced by some of the highest levels of Der p 1 in the world (11). Der p 1 is the major group one allergen from D. pteronyssinus and induces an IgE response in susceptible individuals contributing to the prevalence and severity of asthma in New Zealand (12).

Not only are house dust mites found in homes, but are also present on clothing (13) and thus have the potential to contaminate urine specimen containers if strict hygiene conditions are not adhered to when collecting the sample. House dust mite allergen has even been detected on human skin and in hair (14,15) suggesting that these sites may also be a potential source of house dust mite contamination of urine samples. A further source of dust mite presence in urine could come from ingestion of mite-infested flour products (16).

It is surprising that more reports on the presence of dust mites in urine are lacking given their high presence in the New Zealand environment. I am aware of only one other (unreported) finding of dust mites in urine in New Zealand. The reason might be their misidentification as lice, or that they resemble food contaminants. Also, in unstained preparations dust mites are transparent and thus may be overlooked. Species identification requires specific expertise of which only a few specialists in New Zealand have this experience. An excellent pictorial guide to dust mite identification has been published and may serve as a resource (17).

References

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