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GENERAL UROLOGY

Case Report

A rare urogenital myiasis caused by *Psychoda albipennis*: a case report

Psychoda albipennis'in neden olduğu nadir bir ürogenital miyasis: olgu sunumu

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ABSTRACT

Myiasis is the infestation of body tissues or organs by dipterous fly species and is often associated with poor hygiene. Urogenital myiasis is uncommon, and *Psychoda albipennis*-induced urogenital myiasis is very rare. In this article, we present a case of urinary myiasis caused by *Psychoda albipennis*. The patient claimed that he had observed more than 10 black-grayish-colored mobile particles in his urine. We identified them as the fourth stage of the moth fly Psychoda albipennis. The patient was a farmer and lived in Ankara, Turkey. He was treated with antibiotics, and there were no complications during or after treatment.

Key words: *Psychoda albipennis*; urinary myiasis.

ÖZET

Miyasis, doku ve organlarda dipterous sineklerinin neden olduğu bir enfestasyondur ve sıklıkla kötü hijyenle ilişkilidir. Ürogenital miyasis sık görülmezken *Psychoda albipennis*'in neden olduğu üriner miyasis çok nadir karşılaşılan bir durumdur. Bu yazıda *Psychoda albipennis*'in neden olduğu bir üriner miyasis olgusu sunulmaktadır. Hasta, idrarında 10 dan fazla sayıda, gri renkli, hareketli partiküller gördüğünü ifade etmiştir. Bu partiküller Psychoda albipennis'e ait 4. evre sinek larvaları olarak tanımlanmıştır. Hasta Türkiye'nin Ankara ilinde yaşayan bir çiftçidir. Antibiyotik ile tedavi edilen hastada, tedavi sırasında ve sonrasında komplikasyon görülmemiştir.

Anahtar sözcükler: *Psychoda albipennis*; uriner myiasis.

Case report

In this case report, we present a case of a 55-year-old man with urogenital myiasis caused by *Psychoda albipennis*. He presented to the hospital with dysuria and claimed that he had observed more than 10 black-grayish-colored mobile particles in his urine at different times over a two-month period. The patient lived in Ankara, Turkey, and had a history of exposure to a great number of flies while working in the garden.

A physical examination did not reveal any abnormalities. A biochemical examination and complete blood count were normal. Computerized tomography (CT) of the urogenital system was completely normal. However, in the control CT, it was observed that the bladder walls were thicker 2 months following treatment. Therefore, we performed cystoscopy, which revealed no abnormalities in the urethra, the bladder mucosa or the bladder capacity. The uroflowmetry was also normal before and after treatment. The patient did not have a familial or medical history of urogenital disease or infection.

The patient had undergone an operation for a rectal adenocarcinoma 4 years prior to the current complaint. The tumor was 2x2 cm in size and was located 20 centimeters from the rectum. It had been completely removed. Because 14 out of 24 lymph nodes had been invaded by the tumor, he had undergone a 28-day period of radiotherapy and 6 chemotherapy sessions with FUFA (5-fluorouracil and folinic acid). A recurrence did not occur during the follow-up period.

No parasite eggs, leukocytes or erythrocytes were visible in a microscopic examination of

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the urine. Over the following three days, four black-grayish larvae that were active, hairy and of approximately 1 cm length were isolated from the urine. The larvae were preserved in 70% ethyl alcohol.

The larvae were identified as the fourth stage of the moth fly *Psychoda albipennis*. (Figure 1 and 2) The patient was treated with cefpodoxime proxetil and methenamine anhydromethylene citrate. No more larvae were isolated from the patient following treatment

Discussion

Myiasis is a term that describes the infestation of body tissues or organs by dipterous fly species. More than 50 species of flies causing myiasis have been described previously. Myiasis is often associated with poor hygiene and is mostly observed in rural areas.[1,2] In a literature search, we found less than 30 case reports of urogenital myiasis. Urogenital myiasis caused by *Psychoda albipennis* is very rare. To the best our knowledge, only three cases have been reported in the literature, and this is the fourth case report on this topic.[3-5]

Figure 1. The fourth stage of the larvae of *Psychoda albipennis*

Figure 2. Macroscopic appearance of larvae

Psychoda albipennis is often observed in the temperate regions of Europe and China. It is also observed in the Turkish cities of Ankara, Istanbul, Bursa, Edirne, and Tekirdağ.[4,5]

Adult flies are approximately 2 mm in length and covered with intense hair, and they primarily reside in houses, particularly in moist areas such as the toilet and the bathroom. Adult flies leave their eggs in moist and dim places and on hard objects and stones. The fly larvae are found in dirty, moist places, spoiled vegetables and fruits, sewage-irrigated plants, and rubbish dumps. In the fourth stage of larval growth, the larvae are commonly grayish in color and covered with hair. They typically consist of seven or eight segments and have a siphon at the end of the last ring.[5]

In rare cases, the eggs can be transmitted to the urogenital opening, and the larvae then hatch into the urogenital region. In our case, the patient was exposed to a great number of flies in the air while working in the garden and reported killing many with his hands. We therefore hypothesize that he carried the eggs to his urogenital opening on his unwashed hands while urinating. His complaints began one month after this event, and he excreted more than 10 larvae through the urine within two months. No more larvae were isolated from the patient following treatment.

Urinary myiasis is rarely observed in humans and is strongly associated with poor hygiene; small measures can prevent its development. People living in cities located in tropical climates should be examined very carefully, and detailed histories should be obtained to make a correct diagnosis. Patients may also benefit from antibiotic and antiseptic treatment for urinary myiasis.

Conflict of interest

No conflict of interest was declared by the authors.

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