

Psychoda albipennis myiasis as a rare cause of erectile dysfunction: A case report

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Abstract

Urogenital myiasis occurring with the settlement of fly larvae of the order Diptera is facultative and is rarely encountered in humans. This study presents a case of urogenital myiasis caused by *Psychoda albipennis* in a 42-year-old male patient. The patient was admitted to our hospital with complaints of groin pain, pollakuria and erectile dysfunction and claimed that he saw motile larvae in his urine. Three larvae were collected from the patient's urine, microscopically examined and identified as fourth-stage larvae of *P. albipennis*. The patient's complaints ceased after the application of an antibiotic and urinary antiseptic. It was concluded that myiasis should be considered in patients with urogenital complaints.

KEYWORDS

erectile dysfunction, impotence, myiasis, *psychoda albipennis*, psychogenic

1 | INTRODUCTION

The word 'myiasis' comes from the Greek word 'myia', which means fly. Myiasis is when larvae or eggs of fly species belonging to the order Diptera (class Insecta) cause pathological lesions in the tissues of humans or other vertebrates (Cestari et al., 2007). For their larvae and eggs to develop, flies that cause myiasis prefer humid environments with organic wastes (such as garbage and sewage water) and decaying animal tissues.

Infestation may develop when the larvae settle in spaces such as the genital and urinary tracts. One of the fly species that causes urogenital myiasis in humans is *Psychoda albipennis* (family Psychodidae, subfamily Psychodinae) (Gashout et al., 2019). The adults of this species are small flies (1.5–2 mm) with a moth-like appearance. They live in homes, especially in moist toilets and bathrooms. Their larvae are more or less cylindrical, grey-white in colour, and pale, short, hairy or scaly, sometimes with teeth on the edges.

There is a breathing tube on the last segment and a pair of stigmas at the tip with long hair around it. There are four larval stages and the larvae are found in moist, dirty places; rotten parts of vegetables and fruits; and near sewers (Shimpi et al., 2018). This report presents a case of a 42-year-old man who experienced psychogenic impotence after being infested with *P. albipennis*.

2 | CASE PRESENTATION

A 42-year-old male patient was admitted to our outpatient clinic with complaints of groin pain, pollakuria, erectile dysfunction and the occurrence of worm-like moving parts in the urine, which had been occurring for about a month. He indicated that the erectile dysfunction had started concurrently with seeing the worms. He had a regular sex life with one partner. The patient was a law graduate, worked as an inspector and lived in the city centre. Three months prior, he had travelled to the countryside for only 2 days, where he stayed in a traditional cottage with mild hygiene conditions. The cottage did not have a proper sewage system or structured septic pit.

In the physical examination, other systems were evaluated and showed normal results aside from suprapubic tenderness. A urine sample was taken, which revealed 5–6 leukocytes and 7–8 erythrocytes according to the microscopy examination. The results of urinary system ultrasonography were normal. Blood tests were performed, and no abnormal results were noted in total blood count or biochemical parameters.

The patient underwent follow-up, and the first was scheduled 1 week later. The patient was instructed to monitor his urine, collect it and bring it for analysis. The patient obtained three maggots from his urine and brought them in his first-week follow-up. The analysis

indicated that they were larvae. It was seen macroscopically that the larvae were covered with hairs between 4 and 8 mm towards the posterior siphon area. They were determined to be the fourth-stage larva of *P. albipennis*.

The patient was advised to increase water intake to facilitate the excretion of the larvae. He was given a single dose of 12 mg of ivermectin and a course of urinary antiseptics (Osorio et al., 2006). At the end of 20 days of follow-up, the larvae stopped emerging from the patient, and his complaints were resolved, including erectile dysfunction.

3 | DISCUSSION

The larvae of *Fannia scalaris*, *Chrysomya bezziana*, *Sarcophaga pernix*, *Lucilia sericata* and *Eristalis tenax* have been identified as causative agents in urogenital myiasis in different countries. *P. albipennis* is also one of the causes of urogenital myiasis and is found in the temperate climatic regions of Europe and China (Culha et al., 2016). *P. albipennis* has been reported widely in different regions in Central Anatolia, Turkey (Taylan-Ozkan et al., 2004). *P. albipennis* is especially seen in tropical, subtropical and hot temperate regions and in the palaeartic region, which includes Turkey.

Cases of urogenital myiasis cases are facultative, and reports indicate that the cases are mostly associated with poor hygiene conditions (Singh & Kaur, 2019). The larvae are left near the urethral meatus and invade the urinary tract in a retrograde manner. The larvae move upwards and causes a lesion called myiasis, which is characterised by tissue loss (Poindexter, 1979).

The fourth-stage larvae of *P. albipennis* are white-grey in colour with an average length of 3–5 mm and slightly flattened shape. The larvae may have denticles on the edges and are covered with short hairs or scales. The number of plaques in the dorsal part of the body is variable, and 7–8 rings are generally located towards the back. There is a pair of stigmas with hairs around the tip of the siphon, which tapers from the bottom to the tip (Faridnia et al., 2019). In our case, the larvae obtained were 4 mm long, and hairs were observed around the siphon (Figures 1,2, Supplemental Figures S1 and S2).

Common complaints in patients with urogenital myiasis include dysuria, pollakiuria, haematuria, flank pain, suprapubic tenderness, nausea and vomiting. These complaints are known to develop as a result of inflammatory reactions in the urinary system tissue caused by the larvae (Jeremy-Depatureaux et al., 2019). In the patient presented, erectile dysfunction was also observed in addition to dysuria, pollakiuria and suprapubic tenderness.

The results of urinary system ultrasonography and blood tests were normal. Erectile dysfunction can often accompany urinary tract infections (Wang et al., 2018). In this case, the patient's awareness of the parasites in his urine and anxiety about transmitting them to his partner suggested that the erectile dysfunction may have been a psychological effect (Velurajah et al., 2021). Thus, the eradication of the parasite corrected the erectile dysfunction as well.



FIGURE 1 View of the parasite under the microscope, trunk (×10)



FIGURE 2 View of the parasite under the microscope, siphon (×100)

Myiasis in humans is treated according to the anatomical region where the larvae are located. In urogenital myiasis, the larvae emerge spontaneously, alive or dead. In cases where the larvae are in an accessible area, the larvae should be removed directly without damaging the tissue. In cases of underlying factors such as damaged tissue or operation, antiseptic application to the relevant tissue

and oral antibiotics are used to prevent complications (Shakoor & Beg, 2010).

In the present case, increased fluid intake was suggested to ensure the proper disposal of the larvae in the patient's urogenital system. Urinary tract antiseptics and antibiotics were prescribed to prevent possible complications. During the follow-up, no maggots emerged, and the patient showed no complaints.

4 | CONCLUSION

Urinary myiasis caused by *P. albipennis* is a rare disease. It is very important to investigate the history and risk factors in the diagnosis of the disease. The incidence increases in hot summer months, humid environments and poor hygiene conditions. Increased fluid intake, urinary system antiseptics and ivermectin can be used in treatment. Hygiene is the foremost factor in prevention. An indirect clinical presentation of the parasite can also be encountered rarely.

DATA AVAILABILITY STATEMENT

The data that support the findings of this study are available from the corresponding author upon reasonable request.

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SUPPORTING INFORMATION

Additional supporting information may be found online in the Supporting Information section.

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