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Case Report

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Case Report of Uncomplicated Urinary Myaisis in A Healthy Sudanese Child

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ABSTRACT

Myiasis is the infestation of live vertebrates (animals and/or humans) with fly larvae. Infestation can affect many parts of human body that flies can reach and lay their eggs in. Genitourinary myaisis is a rare type of myaisis probably because the external genitourinary area is less exposed to the exterior.

Cases are reported worldwide from different ages. We are reporting the first case of urinary myaisis from Sudan in a ten years old healthy female who required no treatment and recovered spontaneously with no recurrence on long term follow up.

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Introduction

Myiasis is the infestation of live human and vertebrate animals with dipterous fly larvae, which, at least for a certain period, feed on the host's dead or living tissue, liquid body substances, or ingested food [1-3]. The classical classification of myiasis by ICD-10 (International Classification of Disease) is based upon the part of the host that is infected, according to which myaisis is classified as dermal ,sub-dermal, cutaneous ,nasopharyngeal, ophthalmic or ocular in or about the eye, auricular in or about the ear, gastric, rectal, or intestinal/enteric for the appropriate part of the digestive system and urogenital [4] .Infestation occurs when the fly lies its eggs on different body areas such as wounds and body orifices or even intact skin.

Myiasis occurs worldwide with more cases reported from tropical, subtropical and warm temperate areas.

Urinary myiasis is rare probably because the genitourinary area is usually less exposed to the exterior. Cases usually have poor genital hygienic conditions and are reported relatively more in patients of low socio-economic status [5]. Patients may be visiting or living in environments with poor sanitation [6]. However, in some cases, no clear risk could be identified. Invasion of the urinary tract occurs through inoculation of the urinary orifices in a normal urinary tract or a urinary tract that has been instrumented, [7,8]. Hatching larvae migrate through the urinary orifice reaching the urethra and urinary bladder causing urinary symptoms. There are cases of urinary myiasis reported worldwide but up to our knowledge, this is the first case reported from Sudan.

Case Presentation

A 10 years old female presented to Sea Port Corporation Hospital in Portsudan with intermittent passage of motile, black-color worm -like organisms in her urine for the past ten days. She didn't complain of dysuria, burning micturition, frequency or loin pain. Systemic clinical examination (including inspection of external genitourinary area) was normal.

Investigations

Investigations requested included urine analysis, stool analysis, urinary system ultrasonography and full blood count. All investigations did not show abnormal features except the urine analysis. Macroscopic examination of the urine showed yellow, clear urine with multiple, small, motile, brown to dark-color larvae, with different sizes ranging from 4-8 mm (Figure 1). While microscopic examination on wet preparation revealed no pus cells or RBCs. Microbiological examination identified dark brown, segmented larvae covered with short seta and belonging to Diptera Order of flies (Figure 2).

Figure 1: Macroscopic examination of the urine showed small, motile, brown to dark-color larvae

Figure 2: Microbiological examination of the urine revealed, segmented larvae covered with short seta and belonging to Diptera Order of flies

Treatment and follow up

Number of larvae passed in the urine decreased gradually till they disappeared without receiving any treatment. The patient was followed for two months during which there was no further passage of larvae.

Discussion

Urinary myiasis is a rare type of myiasis. Infestation occurs due to contamination of the external genitourinary area with eggs of various types of flies which may be attracted by the odor of urine and other human excretions, with consequent ascending migration of the hatching larvae through orifices. Cases reported around the world included a wide age spectrum including neonates. Various risk factors were identified in pediatric cases such as the usage of recycled dipers that were washed and left to dry on contaminated areas. Other cases reported wearing contaminated underwear and unhygienic circumcision and sitting bare bottomed on the soil as a risk factor of penile and vulval myaisis [9,10]. However, in some cases like in our case no clear risk could be identified Clinical presentation of urinary myaisis may include burning micturation, dysuria, penile swelling and discharge and passage of larvae in the urine like in our case [10,11]. Diagnosis can be done by identification of the larvae within a urine specimen or extraction of the larvae from a wound or discharge. Medical therapy can include Ivermectin an antihlementhic agent, which can be used for treatment of myiasis [12]. Antiseptics, antibiotics and drinking plenty of water were used in management of some cases Mechanical removal of larvae can be done when possible, as seen in a Nigerian child with penile myaisis and showed immediate relief of symptoms [10,11,13]. In our case the patient recovered spontaneously without any treatment, as reported from another case from Saudi Arabia [14].

Conclusion

Urinary Myiasis is a rare type of myaisis. Clinicians should consider it as an uncommon cause of urinary tract infection.

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References

1. Francesconi F, Lupi O Myiasis (2012) Clin Microbiol Rev 25: 79-105.
2. Hall M, Wall R (1995) Myiasis of Humans and Domestic Animals. In: Advances in Parasitology. Elsevier 257-334.
3. Jeremy F, Hotez PJ (2014) Manson's Tropical Infectious Diseases. Elsevier
   Available from: https://linkinghub.elsevier.com/retrieve/pii/C20100662237
4. International Disease Classifiation (IDC)-10 Wikisource, the free online library [Internet]. Available from: https://en.wikisource.org/wiki/Page:ICD-10-CM_(2010).djvu/57
5. Sing A, Kaur J (2019) Occurrence of human urogenital myaisis due to neglected personal hygiene: a review. Trans R Soc Trop Med Hyg 113: 4-10
6. El-Dib NA, El Wahab WMA, Hamdy DA, Ali MI (2017) Case Report of Human Urinary Myiasis Caused by Clogmia albipunctata (Diptera: Psychodidae) with Morphological Description of Larva and Pupa. J Arthropod Borne Dis 11: 533-538.
7. Hyun DY, Cain MP, Blue-Hnidy DE, Conway JH (2004) Urinary myiasis associated with ureteral stent placements: The Pediatric Infectious Disease Journal 23: 179-181.
8. Singh TS, Rana D (1989) Urogenital myiasis caused by Megaselia scalaris (Diptera: Phoridae): a case report. J Med Entomol 26: 228-229.
9. Ogbalu OK, Achufusi TG, Orlu EE, Bawo DS, Adibe CH, et al. (2011) Human Myiasis in Neonates and Children of the Niger Delta Wetlands and South-East Nigeria. JCDSA 01: 171-176.
10. Akinyosoye G, Adekunle M, Ajayi O, Ransome-Kuti O, Lamina A (2020) Urinary Myiasis in a Nigerian Child: A Case Report and Review of the Literature. Nigerian Journal of Clinical Medicine10: 21-26.
11. Demir AD, Iraz M, İpek DNS (2015) Urogenital myiasis caused by Psychoda albipennis in a child. Turk Pediatri Ars 50: 65-68.
12. Myiasis Treatment & Management: Emergency Department Care, Consultations, Complications [Internet]. [cited 2022 May 7]. Available from: https://emedicine.medscape.com/article/1491170-treatment
13. El-Badry AA, Salem HK, El-Aziz Edmardash YA (2014) Human urinary myiasis due to larvae of Clogmia (Telmatoscopus) albipunctata Williston (Diptera: Psychodidae) first report in Egypt. J Vector Borne Dis 51: 247-249.
14. Wakid MH (2008) A Laboratory-Based Study for First Documented Case of Urinary Myiasis Caused by Larvae of Megaselia scalaris (Diptera: Phoridae) in Saudi Arabia. Korean J Parasitol 46: 33.