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RESEARCH ARTICLE

CASE REPORT OF HUMAN URINARY MYIASIS BY PSYCHODAALBIPENNIS

Rehab Khaleel Alenazy[1], Afnan Abdulrahman Alwarthan[2], Mohammed Ali Alghamdi[3] and Ahmad Mohealdeen Aldawalibi[4]

1. Family Medicine -Senior Registrar Culster 1 in Riyadh.
2. General Practitioner Cluster 1, Riyadh.
3. Family Medicine Resident First Health Cluster Riyadh.
4. Family Medicine Resident King Saud Medical City.

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Abstract

Introduction:-

Psychodaalbipennismyiasis is infestation of the urogenital tract by Psychodaalbipennis which are facultative parasites of the subfamily Psychodinae. It is commonly found in tropical and subtropical area, and widely proliferate in summer time. It usually have verity of symptoms and sign, ranging from dysuria abdominal pain, flank pain, haematuriaand visualization of the larva. Primary treated by single dose of Ivermectin.

The current case of myasis is likely an accidental infestation related to poor personal hygiene, in which the adults of myasis are attracted by the odor of urine and lay eggs directly on the patient's genitourinary area.

Methodology:-

Search was conducted using the pubmen and google scholar engines, using the key word: Psychodaalbipennismyiasis, urogenital myasis, and urogenital parasite. Paper were included in our review mostly is a case report as the metanalysis and systematic review is not available in English. There was a limitation such as language, rare of the cases where it was insignificate to conduct a metanalysis of the subject.

Case presentation:

A 8 year old female from a lower socio-economical class, presented to prince sultan bin abdulazizphc with a complaint of the repeated passage of live worms in urine since 2–3 years. She passes 15–20 worms. She complained of dysuria, fever, and itching in the periurethral and genital regions on and off during this period. She was treated at other centers with suspicion of UTI and no improvement.

By naked eye examination, the larva was cylindrical in shape with rounded ventrally curved anterior end and tapering posterior end. The body of the larva was segmented and covered by short seta. Larvae were dark brown to black in color, rapidly motile when freshly passed with different sizes ranging from 8–12mm in length.(figure 1)

Investigations such as CBC,urin analysis and stool analysis all revealed no abnormalities..(figure 2-3)

Corresponding Author:- Rehab Khaleel Alenazy
Address:- Family Medicine -Senior Registrar Culster 1 in Riyadh.

Microscopic examantion :

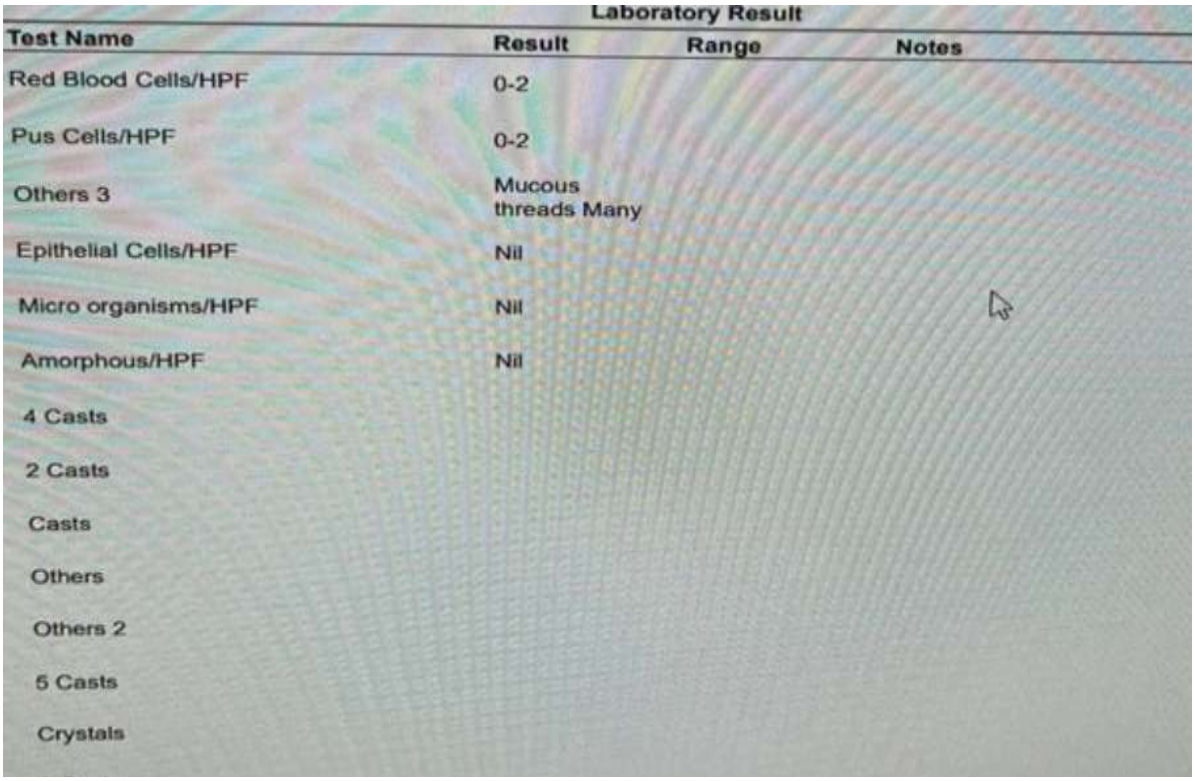
The patient relative refused further Urine Microscopic examination. The patient was referred to the Urology clinic for further investigation but attendance was unconfirmed?

Figure 1:-

Laboratory Result

Test Name	Result	Range	Notes
HCT	38.0	35 - 45	
HGB	12.8	11.5 - 15.5	
MCH	28.4	25 - 33	
MCHC	33.8	31 - 37	
MCV	83.9	77 - 95	
MPV	8.9	7.4 - 10.4	
PLt	403	180 - 400	
RBC	4.5		
RDW	13.6	11.6 - 14	
WBC	7.7	5 - 13	

Figure 2:-



Laboratory Result			
Test Name	Result	Range	Notes
Red Blood Cells/HPF	0-2		
Pus Cells/HPF	0-2		
Others 3	Mucous threads Many		
Epithelial Cells/HPF	Nil		
Micro organisms/HPF	Nil		
Amorphous/HPF	Nil		
4 Casts			
2 Casts			
Casts			
Others			
Others 2			
5 Casts			
Crystals			

Figure3:-

Discussion:-

Psychodaalbipennis is of the subfamily Psychodinae. It is a facultative parasite that is commonly infect the vertebral mammalian including human. It is commonly found in topical and subtropical area, such as India, turkey, part of Europe and Middle east.1,4

The fly of Psychodaalbipennis usually lay it egg in in damp and dirty areas, in vegetables and fruit going bad, in piles of garbage and in places where plants are irrigated with canalization. It feed on bacteria, for that, it found commonly in the bathrooms and moist environment. 3,4

Myiasis are classified based on the entomological methods or body part. entomological method, is based on the parasitic characteristics of fly larvae in which it is divided into obligatory, facultative and accidental types. 5

It is abundantly infect the skin causing cutaneous myiasis. cutaneous myiasis is common in the southern area of Saudi Arabia. Multiple cases have been reported framing similar picture including exposure to animals, residing in a rural area and having a comorbidity such as diabetes. 9, 10

One case reported being infested after hoarse riding of colonized hoarse, Which present as pruritis leading to disrupt the integrity of the skin allowing the egg to settle in a proper environment to be flourish to larva. For that, it present as nodules and swelling, which need surgical exploration to remove the parasite. 9

Other case were reported in Makkah of a gout worker who is diabetic, which emphasis the important of diabetic control and hygiene. 10

On the other hand, urogenital myasis is very rare because the area is usually covered and protected. However, the infestation can be transported from unsensitized bathrooms or sleeping without cover where the flay can lay the eggs in the area directly. 4,5,6

Myiasis of the urogenital area, have a wide variety of presentation, ranging form asymptomatic, to urinary symptoms such as (dysuria, frequency, urgency, flank pain), abdominal pain, itchiness, vaginal discharge and in advance stage macroscopic visualization of the larvae passing with the urine. 4,5,6,7

At the earlystage of the infestation,the cases were reported in India, turkey, Iran and middle east have been miss diagnosed as UTI, urinary stones or even GI parasite, and have been treating accordingly. However, since the symptoms of the patient did no resolve, and the parasite thrive into the 4 stage of the larvae , which is seen and reported by the patient, a microscope were used to identify the parasite. 4,5,6,7

All cases were treated with antibiotics and antiparasitic and encourage to drink a 3 liter of water during the day, followed by cryptoscopic evaluation of the urogenital area. Some cases reported progressive and continuous necrosis of the bladder wall , Edema in the prostatic urethra , and debris and sediment accumulation at the base of the bladder. Also, in some study have linked penile cancer in male to urogenital myasis and reported as a risk fator. 2,3,4

All cases publish and reported emphasis the importance of self hygiene and using a sanitized facilities. Yet, considering cases were reported lately of a patients who had a good hygiene and good socioeconomic status have been diagnosed with 4th stage of Psychodaalbipennis, considering only hygiene and socioeconomic status is not enough, especially in our country Saudi Arabia, were the travel to turkey, Iran and India has increased abundantly, considering a travel history is important too for the early diagnosis before development of the larva to the 3rd or 4th stage , which can produce toxin leading to complication of the area.

Conclusion:-

Psychodaalbipennis fly is widely spread in a western area of Saudi arabia causing cuateanusmyasis. However, urogenital mysis is rare, and have been reported lately in Saudi arabia, seen at the 3rt or 4th stage of larva.

The fact that it easily treated and if not treated early or appropriately can lead to devastating consequences such as penile cancer, erectile dysfunction in male and infertility and vaginal disfiguration infemales, makes it important to study and understand the diagnosis and treatment.

References:-

1. H; GAAAHOA-D. Urogenital myiasis caused by Psychodaalbipennis in a female child in Libya [Internet]. Turkiyeparazitolojiidergisi. U.S. National Library of Medicine; 2019 [cited 2023Jan12]. Available from: https://pubmed.ncbi.nlm.nih.gov/31502807/
2. Koifman L, Barros R, Schulze L, Ornellas AA, Favorito LA. Myiasis associated with penile carcinoma: A new trend in developing countries? [Internet]. International braz j urol : official journal of the Brazilian Society of Urology. U.S. National Library of Medicine; 2017 [cited 2023Jan12]. Available from: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5293386/
3. Shimpi R, Patel D, Raval K. Human urinary myiasis by Psychodaalbipennis: A case report and review of literature [Internet]. Urology case reports. U.S. National Library of Medicine; 2018 [cited 2023Jan12]. Available from: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6168961/
4. Culha MG, Turker K, Ozsoy S, Serefoglu EC. Urogenital myiasis caused by Psychodaalbipennis [Internet]. Saudi medical journal. U.S. National Library of Medicine; 2016 [cited 2023Jan12]. Available from: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5303781/
5. Hazratian T, Dolatkhah A, Hokmabadi BN, Hazratian E, Paksa A. First record of human urogenital myiasis caused by psychodaalbipennis larvae (Diptera: Psychodidae) in Miandoab, West Azerbaijan Province, Iran: A case report [Internet]. Journal of arthropod-borne diseases. U.S. National Library of Medicine; 2020 [cited 2023Jan12]. Available from: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8053075/
6.Demir AD, Iraz M, İpek DNS. Urogenital myiasis caused by Psychodaalbipennis in a child [Internet]. Turk pediatriarsivi. U.S. National Library of Medicine; 2015 [cited 2023Jan12]. Available from: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4462326/
7.Rasti S, Dehghani R, Khaledi HN, Takhtfiroozeh SM, Chimehi E. Uncommon human urinary tract myiasis due to psychoda SP.. larvae, Kashan, Iran: A case report [Internet]. Iranian journal of parasitology. U.S. National Library of Medicine; 2016 [cited 2023Jan12]. Available from: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5256061/

8.Farrag HMM, Huseein EAM, Almatary AM, Othman RA. Morphological and initial molecular characterization of Clogmiaalbipunctatus larvae (Diptera: Psychodidae) causing urinary myiasis in Egypt [Internet]. PLoS neglected tropical diseases. U.S. National Library of Medicine; 2019 [cited 2023Jan12]. Available from: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6927617/
9.Al Juaid A, Al Zahrani W. FuruncularMyiasis in a child: A case report and literature review [Internet]. Saudi journal of medicine & medical sciences. U.S. National Library of Medicine; 2017 [cited 2023Jan12]. Available from: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6298275/
10.Zaglool DAM, Tayeb K, Khodari YAW, Farooq MU. First case report of human myiasis with sarcophaga species in Makkah City in the wound of a diabetic patient [Internet]. Journal of natural science, biology, and medicine. U.S. National Library of Medicine; 2013 [cited 2023Jan12]. Available from: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3633283/