



# A Rare Case of Vulvar Myiasis in a Mentally Subnormal Young Woman

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## Abstract

Myiasis is defined as the infestation of living tissue by dipterous larvae and is derived from the Greek word "Myia", which means "fly". Cases of external urogenital myiasis in the literature have been documented in women with genital malignancy, decubitus ulcers, external wounds, genital warts, and sexually transmitted diseases. We present a case of a 27-year-old unmarried, mentally subnormal lady with a history of a painful swelling in the vulva for 10 days. Local examination revealed a swelling in the left labia and an ulcer with undermined edges with live maggots inside it. The patient underwent surgical debridement and removal of maggots. Emphasis should be given to prevention of this condition to prevent re-infestation.

**Keywords** Maggots · Myiasis · Vulva

## Introduction

Myiasis is defined as the infestation of living tissue by dipterous larvae and is derived from the Greek word "Myia", which means "fly". The majority of cases of genital myiasis have been reported in tropical and subtropical countries. Myiasis can be classified as cutaneous, wound, cavitary or sanguineous. Urogenital myiasis is a type of cavitary myiasis and can be divided into external and internal urogenital myiasis. External genital myiasis is clinically similar to wound myiasis and can involve the clitoris, urethra, vulva or vagina. Internal genital myiasis is a rare condition that occurs when maggots reach an internal genital organ, such as the uterine cavity.

Cases of external urogenital myiasis in the literature have been documented in women with genital malignancy, decubitus ulcers, external wounds, genital warts, and sexually transmitted disease. We present a rare case of external vulvar myiasis in a mentally subnormal young woman who did not have the usual risk factors.

## Case Report

A 27-year-old unmarried lady from a rural area in Madhya Pradesh, India, presented with a history of swelling and pain in the vulva for 10 days. She also had fever for a day and discharge from the genital region. There was no history of trauma or sexual abuse. There was no history of intake of any immunosuppressive medication or antibiotics. She was unable to give an account of her symptoms and appeared agitated. Hence, the history was obtained from the patient's mother. She was apparently mentally subnormal since birth, which led to a delay in presenting to the hospital. She did not use the regular sanitary pads but instead used rags of cloth which were infrequently washed during her menstrual cycle. She lived in an area of poor hygiene with waste disposal close to the house which attracted flies and other parasites. The toilet was located outside the house.

On examination, the patient was short in stature and was febrile at admission. A general examination revealed mild pallor, and a systemic examination was normal. Local examination revealed a 7 cm × 5 cm swelling in the left labia majora which was warm and extremely tender. An ulcer about 2 cm × 3 cm with undermined edges was seen with live maggots inside it (Fig. 1). Her total white blood cell count was raised, and she had mild anaemia.

She was posted for an emergency debridement under spinal anaesthesia. A longitudinal incision was made along the labia majora. The maggots which were present superficially were removed using forceps. The wound was irrigated with

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**Fig. 1** Swelling, ulceration and discharge in the left vulva



**Fig. 2** Post-operative picture of maggots removed from the wound

hydrogen peroxide, and 25 maggots were removed (Fig. 2). Necrotic tissue and slough were removed from the wound, and the wound was left open. She was started on Inj. Amoxicillin/Clavulanic acid and Inj. Metronidazole and given good post-operative analgesia. Twice daily saline dressings were done, and the wound was healthy. She was discharged with advice about menstrual hygiene and self-care to prevent re-infestation. Telephonic follow-up was done which determined no further infestation.

## Discussion

Myiasis of the vulva is an extremely rare condition. Myiasis is broadly classified into three categories: *Obligatory myiasis* in which maggots exclusively infest a live host, *Facultative myiasis*, in which maggots are normally free-living in decaying matter but may occasionally infest living animals, and *accidental or pseudomyiasis*, in which maggots are accidentally ingested with food and cause intestinal problems by passing through the gastrointestinal tract alive [1].

In India, the most common causative agent of myiasis was found to be *Chrysomya bezziana*. The practice of not wearing undergarments, cervical carcinoma, or sexually transmitted diseases predisposes women to external genital myiasis. Women usually present with itching, pain or formication (feeling of insects crawling). The management is surgical debridement of the wound with manual extraction of the maggots under antibiotic cover. Substances such as hydrogen peroxide, turpentine oil, chloroform and ether have been used to irrigate the wound. They are local irritants which cause hypoxia, causing the deeper maggots to come to the surface of the wound. *Calvopina M et al.* state the use of oral Ivermectin (200–400 µg/kg for one to five days) prior to debridement [3]. Care should be taken to not injure the maggots during the procedure of their removal, as that can cause further inflammation of the wound due to the traumatized maggot.

In this case, the predisposing factors are poor living conditions, bad menstrual hygiene such as use of reusable cloths and inadequate self-care. Women in rural areas are less likely to practice menstrual hygiene compared to women in urban areas (70% vs. 42.1%). Illiteracy and poverty are associated with poor menstrual hygiene, and exposure to mass media has been found to be associated with good menstrual hygiene [3]. Ensuring good general and menstrual hygiene may be challenging in girls with intellectual disabilities, especially in low- and middle-income countries. The United Nations International Children's Emergency Fund (UNICEF)-India introduced the Menstrual Health and Hygiene (MHH) program which has made available teaching material such as charts, simplified pictures, and audios that provide a step-to-step guide to menstrual health. Recent efforts by various organizations in the promotion of menstrual education have largely focused on in-school education; however, it should be extended to reach especially out-of-school disabled girls. Special schools should be equipped with soap, water, and disposal options that are disability accessible and provide free or subsidized access to menstrual hygiene products [4].

## Conclusion

Vulvar myiasis is a rare condition usually associated with genital malignancy, local lesions such as warts and sexually transmitted diseases. Rarely, it occurs in women exclusively due to neglect of menstrual hygiene and poor living conditions. In rural areas, patients come late to the hospital due to unavailability of access to proper healthcare, social stigma, and the use of local medical remedies. Treatment is complete surgical debridement and removal of all maggots.

Public, private, and non-profit sector partnership is crucial in the implementation of outreach programs to meet the need of women with intellectual and physical disabilities. Tailored education of these women and their caregivers regarding general and menstrual hygiene, access to washrooms, and availability of hygiene products are essential to prevent this distressing condition. Furthermore, menstrual health interventions can prove as an entryway to vulnerable women to provide information on the prevention of unwanted pregnancies, sexually transmitted diseases, and sanitation.

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## Declarations

**Conflict of interest** There are no potential conflicts of interest.

**Human and Animals Rights** No experimental study was done.

**Informed Consent** Informed consent was taken from the guardian of the patient due to her mentally subnormal condition.

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