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# A case of umbilical myiasis in a neonate

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## ABSTRACT

This is an interesting case of myiasis found in the umbilicus in an eight-day-old infant with successful treatment. Because of its connection to the vital abdominal organs, any suspicion of infections around the umbilicus always requires immediate medical attention.

*Keywords: myiasis, neonate, umbilical, flies infestation*

## 1. INTRODUCTION

Myiasis is the infestation by fly larvae. It usually occurs in animals. Umbilical myiasis is a rare occurrence in neonates, and few cases have been reported. It happens because of unhygienic cord practices. The condition should be treated in time as it can lead to complications like omphalitis and septicemia. Treatment is the removal of the maggots and treating associated infections.

## 2. PRESENTATION OF CASE

An eight-day-old male neonate from a rural area presented to us with the chief complaints of a foul-smelling discharge from the umbilicus and something coming out around the umbilical region. He was born at term by normal delivery and had a birth weight of 2800 gm. The perinatal period was uneventful, and the baby was discharged after 48 hours of life. Mother was advised not to apply anything to the umbilical cord. Still, there was a history of ghee's application to the umbilical cord immediately after the baby reached home by the grandmother.

The baby was irritable on presentation. He was hemodynamically stable, anterior fontanel was normal. Foul-smelling purulent discharge from the umbilicus and periumbilical redness was present. Multiple maggots were seen coming out of the periumbilical area. The septic screen was negative. An ultrasound scan of the umbilical area showed numerous maggots. Blood culture was sterile, and culture from the umbilical swab revealed *Staphylococcus aureus* growth sensitive to routine antibiotics. The local area was cleaned; we used turpentine to repel maggots. They were then removed with forceps and sent to a public health expert who identified them as larvae of *Chrysomya megacephala*. Intravenous ampicillin and gentamycin were given for seven days. The baby recovered completely and was discharged. On discharge, parents and grandmother were counseled regarding cord care and the importance of keeping adequate sanitation in the home and surrounding areas. There was no sequel on follow-up.

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49 Figure 1,2, Maggots coming out from the periumbilical region  
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53 Figure 3, Maggot  
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### 56 3 DISCUSSION

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59 Myiasis was first used by an entomologist Frederick William Hope to define the diseases caused by an infestation of  
60 dipterous larvae. It is derived from the Greek word  $\mu\upsilon\acute{\iota}\alpha$  (*myia*), which means fly. (1) These larvae feed on the host's live  
61 or necrotic tissue. (2) .It is more common in animals as compared to human beings. Myiasis occurs in tropical and  
62 subtropic areas because moisture and heat aggravate maggots' growth in poor hygienic conditions. Cases have been  
63 reported in neonates that involved the eyes, ear, nasopharynx, vagina, skin, and intestine (3)(4)(5)(6) (7)(8). Few cases of  
64 umbilical myiasis have been published in the literature. (9) It is a type of cutaneous myiasis. Larval forms of *Cochliomyia*  
65 *hominivorax*, *Chrysomya megacephala*, *Musca domestica*, *Cordylobia anthropophaga*, *Sarcophagidae* family flies have  
66 been implicated(10) (11)(12)(13) (14). Poor umbilical hygiene, hot and humid climate predispose to this condition.  
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68 The skilled birth attendance guidelines in India recommend dry cord care for all births(15). Ghee's application on the  
69 umbilical cord has been reported in many communities and has been associated with an increased risk of neonatal  
70 tetanus(16).

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74 The female flies lay the eggs on the umbilicus, which hatch into larvae that transfer to pupa. Larvae grow rapidly and  
75 reach maturity in 4-8 days (17). The age of presentation varied from 2 to 20 days of life(12)(18). They penetrate the  
76 surrounding skin and cause inflammation. It may cause a secondary bacterial infection or/and sepsis(19)

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79 Treatment of the disease consists of excising the gangrenous umbilical cord, cleaning the local area with antiseptics,  
80 killing the larvae by suffocating them, and then subsequent removal and treatment of the associated local or systemic  
81 infection. (20). These larvae can be repelled with turpentine or ether. (9)(12). Camphorated petroleum jelly has also been  
82 used in case of cutaneous myiasis to repel larvae. (4). Our patient responded well with treatment, and there was no  
83 sequel on follow-up.

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85 The traditional practice of ghee application on the umbilical cord should be strongly discouraged. After the birth of the  
86 baby, in addition to parents, even the mother-in-law needs to be counseled about dry cord care.

#### 91 4 CONCLUSION

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93 This article stresses the importance of keeping good umbilical hygiene and managing umbilical myiasis in time to prevent  
94 life-threatening complications.

#### 97 COMPETING INTERESTS

98  
99 Authors have declared that no competing interests exist.

#### 101 AUTHORS' CONTRIBUTIONS

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103 All authors read and approved the final manuscript.

#### 105 CONSENT

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107 All authors declare that 'written informed consent was obtained from the patient (or other approved parties) for publication  
108 of this case report and accompanying images. A copy of the written consent is available for review by the Editorial  
109 office/Chief Editor/Editorial Board members of this journal.

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