Picture Stories

Neonatal umbilical myiasis

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Myiasis is an animal or human disease caused by the immature stage (maggots) of flies which feed on the host's necrotic or living tissue[1]. Myiasis in the neonatal period is a rare occurrence[2].

Case Report

A 7 day old term, appropriate for gestational age, girl was delivered by normal vaginal delivery at home. There was no history of any topical application over the umbilicus. Baby presented to our hospital with a history of worms coming out of the umbilicus along with excessive cry. She also had a history of yellow discolouration of skin for the last 2 days. There was no history of poor feeding, lethargy, distension of abdomen or fever.

On examination, her reflexes and activity were good. There was no pallor. She was icteric. Respiratory rate was 34/minute and heart rate was 132/minute. Baby was on breast milk and sucking well. Local examination of umbilicus revealed thin whitish glistening worms coming out from the base of the umbilical stump. Cord had fallen off on the previous day (Figures 1 and 2).

Sepsis screen was negative. Blood culture showed no growth. She had unconjugated hyperbilirubinaemia, with a total bilirubin level of 22mg/dl and unconjugated bilirubin of 19.8mg/dl.

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Figure 1: ***Worms from umbilical stump***

Figure 2: ***Worms in bottle***

Ultrasonogram (USG) of the abdomen was normal with no sinus tracts visible. Swab from umbilicus showed no pus cells and no microorganisms. Maggots were extracted with forceps after application of ether and sent for identification. It was identified as *Chrysomya megacephala*. Twenty seven maggots were removed over the next 3 days.

Child was given phototherapy for 2 days for her hyperbilirubinaemia. She was kept under observation for a further period of 3 days and thereafter discharged with local application of mupirocin ointment.

Discussion

Reverend Frederick William Hope coined the term myiasis in 1840 to refer to diseases resulting from dipterous larvae as opposed to those caused by other insect larvae. He found a number of cases of myiasis from Jamaica caused by unknown larvae, one of which resulted in death[3]. *Cochliomyia hominivorax* was the most prevalent species in human myiasis reports, occurring mainly in summer and located in legs, head, thorax, abdomen and pelvis[4]. The third stage larva is ideal for species identification. We isolated *Chrysomya megacephala* from our patient[5].

Umbilical myiasis is a form of cutaneous myiasis which occurs when a housefly lays eggs within the umbilicus. Each female can lay approximately 500 white eggs, approximately 1.2 mm in length and in several batches. After 24 hours, 3-9 mm long, whitish larvae (maggots) hatch from the eggs. The larvae usually live as facultative parasites for a week and feed on dead and decaying organic material or faeces. At the end of their third instar, the maggots crawl to a dry, cool place and transform into pupae which are a reddish-brown colour and about 8 mm long. The adult flies then emerge from the pupae completing the metamorphosis cycle[6,7]. In umbilical myiasis the housefly lays eggs on dry skin and the larvae subsequently invade the wound and feed voraciously on healthy tissue, usually in groups to produce characteristic pocket like injuries[6].

The larvae can be removed from the affected site of the patient by irrigation, manipulation or surgery[5]. The larvae should be killed in hot water to retain the overall shape as the posterior spiracles are very important for species identification. Umbilicus can be irrigated with turpentine half diluted with olive oil. Ether has also been used. We irrigated the umbilicus of our patient with ether for 3 consecutive days and then manually removed the larva with forceps. A USG was also done to rule out any sinus tracts. Systemic sepsis should also be excluded in patients and local antibiotics may be applied as we did for our neonate.

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