

Screw-worm Myiasis of Prolapsed Rectum

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Background: Wound myiasis in the Indian subcontinent is most commonly caused by old world screw-worm (*Chrysomya bezziana*). **Case Report and management:** A 4-year-old malnourished girl presented with full thickness rectal prolapse following acute diarrhea with a large wound and screwworm myiasis of the rectum. Turpentine oil was applied to immobilize the maggots followed by manual extraction. Prolapse was successfully treated by manual reduction followed by strapping of the buttocks. **Outcome:** Child was thriving well and gained 2 kg weight in follow up after two weeks. **Message:** Parents should be educated about taking care of prolapsed rectum.

Keywords: *Chrysomya bezziana, Obligate myiasis, Rectal prolapse*

Myiasis occurs commonly in unhygienic environmental conditions in debilitated patients. Although rectal prolapse and myiasis are common in tropics, association between the two has not been described. We report a case of myiasis in prolapsed rectum in a child.

CASE REPORT

A 4-year-old girl belonging to lower socioeconomic status presented in the outpatient department with complaints of a mass protruding from anus for 15 days. It was small and reducible initially but gradually increased in size and became irreducible. The mother noticed an ulcer on the right lateral aspect of the mass which was rapidly enlarging with whitish colored worms crawling into it for 4 days. Child also suffered from acute watery diarrhea for 7 days prior to above symptoms.

On examination, child was grossly emaciated, pale, sick looking and febrile. She was weighing 8 kg (weight-for-age below third centile). On systemic examination, abdomen was soft and bowel sounds were normal. Local examination revealed full thickness rectal prolapse with a large cavernous ulcer occupying right half of the circumference of rectum measuring about 5 cm × 3 cm. The ulcer was heavily infested with numerous, large actively motile maggots (*Fig. 1*).

Child was admitted; parenteral fluids and antibiotics were started. Turpentine oil soaked gauze pieces were applied locally followed by manual extraction of maggots. Wound became maggot free in four days during which hundreds of whitish briskly motile maggots measuring 10-18 mm were retrieved. The length and

morphology of larva was suggestive of screw-worm (*Chrysomya bezziana*) maggots.

Following regular dressing with povidone-iodine, ulcer healed by 8th day of admission. Manual reposition of prolapsed rectum was done followed by strapping of the buttocks for 24 hours. Child was discharged and was thriving well at follow-up after two weeks.

DISCUSSION

Rectal prolapse is a common condition in children with a

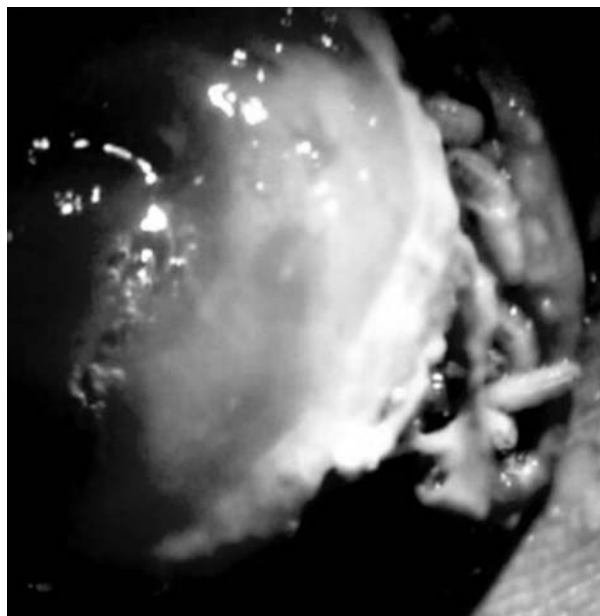


FIG. 1 Deep cleft like ulcer on right lateral aspect of rectum heavily infested with large screw-worm maggots.

peak incidence around 1-3 years of age [1]. Infestation with intestinal parasites, malnutrition, acute diarrhea, ulcerative colitis, pertussis, Ehlers-Danlos syndrome, chronic constipation and myelomeningocele are some predisposing factors for rectal prolapse [2,3]. Our patient was undernourished, and developed rectal prolapse following an acute diarrheal episode. Myiasis may be classified as obligatory, facultative or accidental [1]. The obligatory parasites depend on the host for a part of their life cycle [1,4]. The three major species of obligate parasites implicated for wound myiasis are the New World screwworm (*Cochliomyia hominivorax*), the Old World screwworm, (*Chrysomya bezziana*) and Wohlfahrt's wound myiasis fly (*Wohlfahrtia magnifica*). Psychiatric illness, immunocompromised state, exposed wound with foul smelling discharge, vegetative state and low socioeconomic status are certain predisposing factors for myiasis [5]. The poor housing condition in this young debilitated child might have lead to oviposition by the fly on the prolapsed rectal mucosa.

The species identified in the present case was *Chrysomya bezziana*. The adult is a blue-green fly prevalent in tropical and subtropical countries of Africa and Asia, including India, Saudi Arabia, Indonesia, the Philippines, Papua, New Guinea, and Persian Gulf [6]. Adult fly oviposits only on live mammalian tissue, depositing about 200 eggs at sites of wound or in body orifices such as ear and nose. The eggs hatch after 12-18 hours liberating the white first-stage larvae burrowing gregariously, head downwards, into the wound in a screw worm pattern. The larvae feed voraciously on the living tissue rapidly expanding the wound. In about four days, the larvae moult into the second and third stages measuring 10-18 mm. The third-stage larva falls on the ground to pupate and transforms into adult fly about seven days later. In our case, there was a rapidly enlarging ulcer explained by development of third stage larva from the eggs. Screwworm myiasis has been reported

commonly from tropical countries, including India but rectal involvement has not been reported.

Treatment of myiasis requires removal of all visible larvae, debridement of the necrotic tissue, irrigation with antiseptic solution and daily dressing [7]. Fifteen percent chloroform in olive oil, turpentine oil or ether may be used to immobilize the larvae facilitating their removal [8]. Rectal prolapse spontaneously resolves in most of the children; medical management with stool softeners/laxatives and avoidance of prolonged straining are sufficient.

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