



**Cutaneous Myiasis: Maggot Infestation of a Malignant Wound**  
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**Case:** BL is a 65 year old man with a history of double lung transplant in 2005 for cystic fibrosis for which he was chronically immunosuppressed,. He had squamous cell carcinoma of the face, treated with chemotherapy and radiation, as well as six prior surgeries involving facial resections and reconstructions. He was left with a gaping wound in his mid-face, in addition to several other cancerous lesions on his face. During his last admission, he was seen by the palliative care team for pain and family support. He was discharged home with palliative home care, with a plan to transition to hospice as an outpatient.

Before he had made the switch to hospice, he was readmitted with a maggot infestation of his necrotic midface wound. In the Emergency Room, he had bedside debridement with removal of some of the maggots, but more remained.

Upon discussion, it was clear that the primary goal for his ongoing care was comfort and the plan was to enroll in hospice. However, both the patient and his wife were bothered by the maggots, which she referred to as “the critters.” The patient preferred to remain at home and his wife wanted to care for him at home, but felt that she could not continue to do so with the maggot-infested wound.

**Discussion:** Myiasis is the infestation of a live human with dipterous larvae which feed on the host’s necrotic tissue (1). It can be classified by the area of the body infected. Cutaneous myiasis is found year-round in tropical regions, but is rare in developed countries of the northern hemisphere, where it occurs primarily in summer months

(1). Predisposing factors include advanced age, poor hygiene, poor social conditions, psychiatric illness, diabetes, vascular occlusive disease and open wounds

(2). This patient’s predisposing factors included diabetes, immunosuppression and an open wound.

One case report and literature review found 20 cases in the literature of cutaneous myiasis in malignant wounds of the head and neck (1). Standard guidelines for management of cutaneous myiasis of malignant wounds do not exist, but several authors note that the ideal approach is to remove all larvae and perform surgical debridement (1-4). Ideally, the underlying malignant lesion would be excised, but if that is not possible, the goal is to excise the underlying necrotic tissue.

Treatment approaches other than procedural removal of the maggots include occlusion and administration of larvacides (2). These techniques can be used in addition to manual removal, or if manual removal is not possible. By depriving larvae of oxygen, occlusion of an infested wound either kills the larvae or induces them to move more superficially where they can be removed more easily. Occlusion of infested wounds with a variety of substances has been described, including petroleum, nail polish, animal fat, beeswax, paraffin, hair gel and mineral oil (2). For example, one regimen involves using a thick layer of petroleum with removal every 3 hours until complete removal of larvae is achieved (3).

In terms of larvacides, there are topical options (3), but there is some concern that they may be irritating or even toxic when applied to open wounds (1).

Sesterhenn et al recommended rinsing with antiseptic or antibiotic solutions before daily dressing changes, and noted the importance of keeping the wound covered, particularly during summer months (1).

In addition to topical measures, there are case reports of use of successful use of oral ivermectin (200mcg/kg), including one case of complete resolution after oral ivermectin (2, 3).



**Resolution of the case:** The ENT team felt that to accomplish further removal of maggots and minimize chance of maggot recurrence, BL would need to go to the OR for maggot removal and debridement of the necrotic tissue.. The patient and his wife decided that the maggots were bothersome enough and enough of a barrier to him being able to return home that they wanted to go ahead with the procedure, despite the risks and his limited prognosis (weeks). The procedure was done the next day.

RB was not a candidate for the use of occlusive techniques because his facial wound communicated with his oropharynx and so could not be completely occluded. At the recommendation of the infectious disease team he was given a single dose of oral ivermectin 200mcg/kg.

Prior to his discharge home with hospice, nurses from his hospice agency came to see him in the hospital to learn his wound care regimen. He was discharged per ENT with twice a day wet-to-dry dressings. At home he was having bleeding when the wet-to-dry dressings were removed, so it was changed to daily light packing with xeroform gauze.

Four days after discharge he was transferred to an inpatient hospice facility for restlessness, where he remained for another four days until he died. The maggots did not recur.

#### **References:**

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