Research Note

A case of wound myiasis due to *Lucilia sericata* (Diptera: Calliphoridae) in a patient suffering from alcoholism and mental deterioration

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The authors have already reported six cases of myiasis involving the families Sarcophagidae and Calliphoridae (Chigusa and Sugiyama, 1987; Chigusa et al., 1994, 1996, 1997).

Here we report a case of wound myiasis in which the host patient had been suffering from alcoholism and mental deterioration. The causative maggot in this case was identified as *Lucilia sericata*. The larvae developed fully to the third instar, and as many as 60 larvae were recovered.

**Case Presentation**

The patient was a 60-year-old woman, who had been suffering from alcoholism and insomnia shown since 1986. She had been educated up to junior high school level, and suffered from mental deterioration. In June, 1997, she fell in her house, located in Morioka (39°40’ N), Iwate Prefecture, and sustained an injury to her scalp caused by pieces of broken glass. Even after sustaining the gash, she had left it untreated. Ten days later, when she consulted a psychiatrist, the doctor found a large number of maggots on her scalp wound (Fig. 1). After removal of the larvae, debridement and wound suture were carried out, and she was treated with antibiotics. Hematological examination revealed RBC count of $2.31 \times 10^6/\mu l$, WBC count of $12.04 \times 10^3/\mu l$ (neutrophils 79.6%, lymphocytes 11.7%, basophils 0.4%, eosinophils 0.3%), Hb 6.7 g/dl and Ht 21.6%. These data indicated that the patient had anemia and leukocytosis due to neutrophilia. The wound was healed completely in a month (Fig. 2). The removed larvae were then transferred to Dokkyo University School of Medicine in Tochigi Prefecture in order to grow them to adult flies. The flies were definitely identified as *L. sericata* by Dr. Satoshi Shinonaga, Tokyo.

Fig. 1. The 3rd instar larvae of *Lucilia sericata* wriggling on the scalp injury of the patient. The photograph was taken on June 16, 1997.
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DISCUSSION

Trauma or surgical wounds (Kinebuchi and Ikemura, 1972; Khan and Khan, 1985), and necrotic lesions due to adenocarcinoma (Kani et al., 1981) and squamous cell carcinoma (Hasegawa et al., 1979; Shitara, 1989) can form a basis for myiasis. Therefore, the present case was typical of the circumstances in which myiasis can arise.

It is well known that maggot therapy was used for the treatment of osteomyelitis and other conditions before the development of antibiotics (Sherman and Pechter, 1988). Even though the present patient's injury was untreated for as long as 10 days, the gash healed completely and neatly. This might be partly due to the fact that the fly larvae cleared the debris, necrotic tissue and fluid during the period medical care was unavailable. Consequently, this case might be regarded as a natural maggot therapy of the scalp injury.

Chigusa and Sugiyama (1987) and Chigusa et al. (1994) reported cases of myiasis in which the hosts were debilitated persons, or persons who were unable to drive away flies by themselves, such as neonates and patients who are mentally disturbed or in a comatose state. Furthermore, Chigusa et al. (1996) have indicated that not only elderly or debilitated persons, but also those with psychiatric disorders such as schizophrenia, should be protected from flies, because of their autism and/or diminished sensitivity, which make it easy for flies to deposit eggs or larvae on the patient's body surface or orifices. The present patient had been suffering from alcoholism, which made her indifferent to her personal appearance and resulted in her living under filthy conditions; furthermore, she was not highly intelligent. This case illustrates that alcoholism and mental deterioration are also predisposing factors for myiasis.

The authors emphasize that the families of alcoholic patients and/or persons with mental deterioration should pay special attention to myiasis if these individuals suffer injury.

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REFERENCES


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**Abstract**


