Research Note

Vaginal myiasis due to *Sarcophaga peregrina* (Diptera: Sarcophagidae) on a patient with atrial fibrillation, cerebral infarction and leg amputation

Yuichi Chigusa¹, Satoshi Shinonaga², Masatomo Honda³, Wataru Kanma³, Hiroyuki Kakinuma⁴, Masashi Kirinoki¹ and Hajime Matsuda¹

¹) Department of Tropical Medicine and Parasitology, ²) Department of Anesthesiology, ³) Section of Environmental Parasitology, Department of International Health Development, ⁴) Division of Public Health, Graduate School, Tokyo Medical and Dental University, Yushima, Bunkyo-ku, Tokyo, 113-8519 Japan

Kanna Memorial Hospital, Daikokuchō, Nasushiobara, Tochigi, 325-0046 Japan

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Abstract: A 78-year-old woman, who was admitted to a hospital in Tochigi Prefecture, was found to be infested with maggots around her perineal region in June, 2001. The patient suffered from cerebral infarction and had undergone amputation of her right leg. There was also inflammation and purulent matter around the vulvovaginal lesion. Therefore, this attracted the female sarcophagid fly to deposit larvae around the perineum of the patient. The number of larvae collected from the vagina was 3; and their body length was around 10 mm. Larvae collected were identified as *Sarcophaga peregrina* as a result of adult examination. The present case occurred on a mentally healthy woman whose consciousness was clear, but had physical handicaps, i.e. cerebral infarction and leg amputation.

Key words: *Sarcophaga peregrina*, vulvovaginal myiasis, atrial fibrillation, cerebral infarction, amputation, Tochigi

INTRODUCTION

Chigusa and his colleagues have already published reports of 13 cases of cutaneous, aural and alimentary tract myiasis. The causative agents were *Lucilia sericata* (Chigusa and Sugiyama, 1987; Chigusa et al., 1996, 1998, 1999, 2002), *L. illustris* (Chigusa et al., 1996), *Sarcophaga peregrina* (Chigusa et al., 1994), *S. similis* (Chigusa et al., 1994), *S. melanura* (Chigusa et al., 1997), and *Dryomyza formosa* (Chigusa et al., 2000).

Chigusa et al. have indicated that infants, elderly, debilitated persons and persons with psychiatric disorders such as schizophrenia, alcoholism and drug addiction should be protected from flies, because of their stupor state and/or diminished sensitivity, which may make it easy for flies to deposit eggs or larvae on the patient's body surface, orifices and the alimentary tract.

The authors report a case of vulvovaginal myiasis due to *S. peregrina* (Sarcophagidae) on a woman whose mental and consciousness status were normal but suffered from cerebral infarction and amputation of her right leg due to arterial thrombosis.
CASE PRESENTATION

A 78-year-old woman admitted to a hospital in Tochigi Prefecture, Japan, was found to be infested with maggots around her perineal region in June 2001. Therefore, the senior author was asked to examine and treat the patient. Examinations on perineal, urethral, anal, rectal and vulvovaginal regions revealed that maggots were detected only in the vagina, i.e., *fornix vaginae posterior*. There was also inflammation around the lesion with discharging purulent matter. After the removal of the maggots from the lesion, the authors performed vaginal lavage with physiological saline several times.

The number of collected larvae from the vagina was 3; and their body length was around 10 mm. Tentative identification of the larvae on the spot was the 3rd-instar larvae of the family Sarcophagidae. Rearing of the maggots started with pork from the day when they were found (day 0) at the insectarium of Department of Tropical Medicine and Parasitology, Dokkyo University School of Medicine. Maggots pupariated on day 4 and emerged on day 14. The rearing was carried out under the air temperature of 25°C and 60% RH. The definitive identification was performed by one of the authors (SS) as *S. peregrina* from the morphological characteristics of the adult fly.

This patient had suffered from one sort of arrhythmia; atrial fibrillation and thrombosis of the right femoral artery. The atrial fibrillation and thrombosis led the patient to cerebral infarction of the left middle cerebral artery and amputation of the right leg, respectively. Laboratory examinations of blood and serum revealed only slight anemia.

DISCUSSION

Several cases of vulvovaginal myiasis have been reported worldwide. Those occurred in Malaysia (Ramalingam et al., 1980), in Thailand (Sucharit et al., 1981), in Germany (Tischendorf, 1987), in Turkey (Yazar et al., 2002) and in Brazil (Passos et al., 2002).

Among these reports, Passos et al. (2002) presented 2 cases; 1) a 19-year-old pregnant woman with vulvar myiasis concomitant syphilis, vaginal trichomoniasis, and genital candidiasis and, moreover, she was an HIV positive and 2) a 17-year-old girl who suffered from myiasis associated with extensive vulvar condyloma acuminatum lesions. Those cases clearly demonstrated that patients who had infections and inflammation around and/or inside the vaginal region were one of predisposing conditions for vulvovaginal myiasis. The present case also had inflammation of the cervical region of the uterus with discharging purulent matter; therefore, this might have attracted the female sarcophagid fly to deposit larvae around the perineum of the patient.

It has been indicated that disturbances of consciousness due to cancer (Chigusa and Sugiyama, 1987, Chigusa et al., 2002), pontine infarction (Chigusa et al., 1997) and mental deterioration (Chigusa et al., 1998) as well as newborn baby (Chigusa et al., 1994) were one of the most important predisposing factors for myiasis. Alcoholism (alcohol addiction), which tends to make him or her indifferent to personal appearance, often results in living under filthy conditions; therefore, this disorder was also predisposing factor for myiasis (Chigusa et al., 1998). Furthermore, Fotedar and Banerjee (1991) reported human cutaneous myiasis in a heroin addict with mixed infestation of *C. bezziana* and *Sarcophaga* sp. in India. Patients with severe mental retardation were also likely to be victims of myiasis (Chigusa et al., 1998).

On the other hand, the present case was a mentally healthy woman whose consciousness was clear but had physical handicaps of cerebral infarction and leg amputation. Inflammation of her internal genital organ also played a certain role to attract the gravid fly to deposit larvae.
around the vulvovaginal region. Therefore, the authors emphasize that not only mentally handicapped patients but also physically handicapped subjects were also at risk of myiasis.

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REFERENCES


