

A Case of Nasomyiasis Whose Agent Was *Sarcophaga* sp.

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SUMMARY: Sixteen larvae fell from the nose of a 16-year-old girl, who had been hospitalized in the anesthesia intensive care unit for 4 days because of a traffic accident and had been evaluated as E1M2V1 according to Glaskow Coma Scale. These larvae were examined macroscopically and microscopically and it was determined that they were second stage *Sarcophaga* spp. larvae. There was no lesion in the nose of the patient.

Key Words: *Sarcophaga* sp., nasomyiasis

Etkeni *Sarcophaga* sp. Olan Bir Nasomiyaz Olgusu

ÖZET: Trafik kazası nedeniyle Anestiyoloji yoğun bakım ünitesi'nde 4 gündür yatmakta olan ve Glaskow Koma Skalası'na Göre E1M2V1 olarak değerlendirilen 16 yaşındaki bir kız hastanın burnundan 16 adet larva düştü. Bu larvalar makroskopik ve mikroskopik olarak incelendi ve bunların ikinci evre *Sarcophaga* sp. olduğu belirlendi. Hastanın burnunun içinde herhangi bir lezyona rastlanmadı.

Anahtar Sözcükler: *Sarcophaga* sp., Nazomiyaz.

INTRODUCTION

Invasion of tissues and organs in humans and animals is called myiasis. It is known that every fly larva is not a myiasis agent. The flies whose larvae are myiasis agent generally belong to *Cyclorhapha* subgroups. Myiasis are classified as obligatory, voluntary and coincidental according to agent character. The fly larvae which cause myiasis can live as parasites in skin, subcutaneous tissue, soft tissues, mouth, stomach, intestines, urogenital system, nose, ears and eyes. Myiasis flies are viviparous or oviparous (6, 12).

The larvae which were seen in our case were examined, and they were identified as "*Sarcophaga* sp.". When the literature was reviewed, it was seen that *Sarcophaga* larvae rarely could cause myiasis in humans and this case was found interesting to be published.

CASE REPORT

A 16-year-old girl was taken to Alasehir State Hospital just after a car accident. She had head trauma, loss of consciousness and pulmonary arrest. She was evaluated as E1M2V1 according to Glaskow Coma Scale and referred to Emergency Unit of Atatürk Training and Research Hospital, Izmir for pulmonary support after being intubated.

She was diagnosed as cerebral confusion and intertrochantric femur fracture after physical examination and laboratory studies were performed in emergency unit, and then hospitalized in Intensive Care Unit of the Anesthesiology and Reanimation Department.

Artificial breathing, free naso-gastric drainage, fluid support with parenteral infusion were applied, and antibiotics, antimucolitic, antiedema and vitamin treatments were given to the patient during the hospitalization period.

Four days after hospitalization, larvae fell down from her nose and she was consulted by Microbiology Department. Physical examination revealed a number of white, moving larvae in her nose. The 16 larvae extracted from her nose were collected in serum physiologic, and examined under the light microscope. It was concluded that these larvae would be

agents of myiasis. The studies showed they were second stage *Sarcophaga* sp. larvae (Figure 1).

Mechanical cleaning with iodine solution was applied to the patient three times a day for three days. The larvae fall continued by lessening for two days and no larvae was seen during the one month follow-up, but her consciousness status did not show any change.



Figure 1: A-B. Stigmal plates of second stage *Sarcophaga* sp. larvae(X100)

DISCUSSION

Wohlfahrtia and *Sarcophaga* larvae generally invade nose or throat directly (7). It is reported that *Wohlfahrtia magnifica* and more rarely *Oestrus ovis* larvae cause nasomyiasis in Turkey (12).

Agrawal *et.al* reported *Oestrus ovis* larvae as myiasis agent in nasal cavity of a woman (1). A retrospective study of myiasis in 94 Indian children younger than 6-year-old showed that 81 (86.16 %) had ear, 11 (11.7 %) nose and 2 (2.12 %) ear involvement, and September-October period was the most frequent time of the year for infection (10).

Yılma *et. al.* studied 555 heads of adult sheep obtained from southwest France. They were examined for infestation by

Oestrus ovis. Infestation was present in 65% of the heads of the adult sheep. The monthly prevalence rate was 44% in April while it was 88.2% in November. This study emphasizes the seriousness of the problem in this region (14).

It was striking that the larvae in our patient were found in October.

Urinary myiasis, genital myiasis (3), opthalmic myiasis (11), cutaneous myiasis (8), oral myiasis (2) and rectal myiasis (4) cases which were caused by *Sarcophaga* larvae have been reported.

Jacobsen *et. al.* reported two patients with hospital-acquired myiasis which is a rarely reported nosocomial problem. Both patients were elderly and had lengthy thoracic surgery in August in the same operating room. Larvae, which were of the same species removed from the nares of one patient and from the chest incision of the other. They concluded that *Phaenicia serricata* should be presumed as the agent of hospital-acquired myiasis (5).

The adult forms of *Sarcophaga* sp. are 13-16 mm in size. Generally, the larvae are left not only on meat or putrid organic materials, but also on human and animal wounds or nose cavities. This species is found in Kazakhstan, Middle Asia, West Europa, North America, Austria, Poland and Turkey (9).

Like our study, another case from Turkey that; Yazar *et al.* (13) present a case of oral myiasis in a 15-year-old boy with tuberculosis meningitis. The diagnosis was based on the visual presence of wriggling larvae about 1 cm in size and on the microscopic features of the maggots, especially those relating to stigmatic structures. The larvae were identified as third-stage larvae of *Sarcophaga* sp.

In conclusion, in this case we saw that *Sarcophaga spp.* larvae could cause nasomyiasis and they should be considered in etiologic agents of nasomyiasis.

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