

## ***Chrysomya bezziana* infestation in a neglected squamous cell carcinoma on the face**

Sir,

Myiasis in cancerous wounds occurs as a complication of skin cancers.<sup>[1,2]</sup> Our patient, a 65-year-old woman, was referred to us with blood-tinged, fetid discharge from an old facial wound along with pain and presence of some live worm-like organisms since three days [Figure 1].

She was a known case of facial squamous cell carcinoma (SCC). The cancer began as an ulcer on the left cheek, four years ago, gradually increasing in size and spreading to the nose, upper lip, and para nasal sinuses. Histopathologically, the ulcer showed moderately differentiated SCC. The patient did not receive any treatment until two years ago for



**Figure 1: Larvae of *Chrysomya bezziana* infesting SCC on the face**

radiotherapy. She was of lower socioeconomic strata and had not kept her wound covered. Urgent computed tomography scan of the head showed soft tissue mass with irregular and ulcerated surface, involving medial canthus of left orbit and left side of the nose, with destruction of anterior part of maxillary sinus and sphenoid bone, suggesting a soft tissue malignancy. This infestation was managed with manual removal of larvae by forceps, one by one, until no visible larvae were identified. About 60 larvae were found in the facial wound. The larvae were whitish in color and measured 12–15 mm in length. The site of infestation was irrigated with normal saline. Eventually, she was discharged on oral antibiotics. Two days later, approximately ten live larvae were extracted again from deeper tissues of facial wound. A few of them were preserved in ethanol, submitted to the Department of Entomology for identification of its species. The species was confirmed to be *Chrysomya bezziana*.

Myiasis is defined as the infestation of live vertebrate animals with dipterous larvae which, for a certain period, feed on the hosts' dead or living tissues, body fluids, or ingested food.<sup>[1]</sup> Myiasis is categorized as specific or obligatory and semi-specific or accidental depending on the life cycle of the flies concerned.<sup>[3]</sup>

*C. bezziana*, also known as 'Old World Screwworm', is an obligate parasite and belongs to the order Diptera, family Calliphoridae, and suborder Cyclorrhpha.<sup>[1]</sup>

The adult fly of *C. bezziana* is a green or blue-green fly and widely distributed in tropical and subtropical countries of Africa and Asia, including Southeast Asia, India, Saudi Arabia, Indonesia, the Philippines, Papua, New Guinea, and Persian Gulf.<sup>[1,3]</sup>

The development of *C. bezziana* from egg to adult fly can be completed in 18 days under optimal conditions. The adult female fly lays eggs on live mammals and deposits around 150–200 eggs every two days at the site of the wound in body orifices.<sup>[1]</sup> The eggs hatch after 12–18 hours and the first-stage larvae, white in color and 1.5 mm in length, will emerge from the eggs and then burrow into wound or wet tissues. They feed not only on the hosts' dead tissues but also on the living tissues, and the wounds increase in sizes as they feed. In about four days, the larvae moult into the second and third stages, 4–18 mm in length. After 5–7 days, the third-stage larvae would leave the wound and fall to the ground to pupate, transformed into adult fly

around seven days later.<sup>[1]</sup>

In humans, several risk factors for development of myiasis have been described, such as diabetes mellitus, infected dermatitis, psychiatric illnesses, elderly with dementia, leprosy, and mental subnormality, all of which predispose to poor hygiene and occurrence to chronic wounds.<sup>[1,4]</sup>

Involvement of cancerous wounds, such as SCC, with myiasis is reported very rarely. There are four reports of cutaneous myiasis in skin tumors. The first case is of opportunistic infestation of an ulcerative, neglected SCC with *Diptera* larvae in a 63-year-old man. The second one is of traumatic myiasis in Bowen's carcinoma. The third is a report of myiasis in melanoblastoma in an 83-year-old woman, and the last one, following radiotherapy for SCC of the temple.<sup>[2]</sup> Rubio *et al*, reported three additional cancer-associated myiasis – one laryngeal carcinoma infested by *Chrysomya*, two others, cutaneous BCC infested by *Sarchophaga*.<sup>[5]</sup>

Our case is also an additional report of myiasis caused by *C. Bezziana* following radiotherapy for SCC on the left side of the face.

**Reza Yaghoobi, Nooshin Bagherani**

Department of Dermatology, Jondi Shapour University of Medical Sciences, Ahwaz, Iran

**Address for correspondence:** Dr. Reza Yaghoobi, Department of Dermatology, Emam Khomeini Hospital, 61335, Ahwaz, Iran. P.O. Box: 61335 - 4156. E-mail: yaghoobi\_rz@yahoo.com

## REFERENCES

1. Kwong A, Yiu WK, Chow LW, Wong S. *Chrysoma bezziana*: A rare infestation of the breast. *Breast J* 2007;13:297-301.
2. Hawayek LH, Mutasim DF. Myiasis in a giant squamous cell carcinoma. *J Am Acad Dermatol* 2006;54:740-1.
3. Kumarasinghe SP, Karunaweera ND, Ihalamulla RL. A study of cutaneous myiasis in Sri Lanka. *Int J Dermatol* 2000;39:689-94.
4. Ng KH, Yip KT, Choi CH, Yeung KH, Auyeung TW, Tsang AC, *et al*. A case of oral myiasis due to *Chrysomya bezziana*. *Hong Kong Med J* 2003;9:454-6.
5. Robio C, Ladro'n de Guevara C, Martin MA, Campos L, Quesada A, Casado M. Cutaneous myiasis over tumor-lesions: Presentation of three cases. *Actas Dermosifiliogr* 2006;97:39-42.