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Case Report

Herpes zoster complicated by myiasis

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Abstract

Myiasis is infestation of body tissues of humans and animals by the larvae of *Diptera* [1]. Wound myiasis is seen in neglected ulcers or wounds in most parts of the world. We describe an old lady of herpes zoster ophthalmicus, whose blisters became secondarily infected and dveoped myiasis in them.

Key words
Herpes zoster, myiasis, maggots

Introduction

Myiasis is infestation of body tissues by the larvae of flies. Entomologically flies may be classified into obligatory, facultative and accidental. Obligatory myiasis producers always pass their larval stage parasitically in the body of an animal. Larvae of facultative myiasis producers usually develop on decaying flesh or vegetable matter, but may infest wounds. In accidental myiasis, the eggs or larvae of flies are ingested in food or drink producing intestinal myiasis.

Clinically, myiasis can be classified according to the part of the body affected into cutaneous, nasopharyngeal, ophthalmic, intestinal and urogenital. Cutaneous myiasis includes wound myiasis and furuncular myiasis, in which larvae penetrate and develop within the skin. In nasopharyngeal myiasis, nose, sinuses and pharynx are affected. Ophthalmomyiasis involves eye, orbit and periorbital tissues. Intestinal and urogenital myiasis involve invasion of alimentary tract or urogenital system.1.

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The habits of the flies and their larvae determine the variations in the clinical manifestations. Wound myiasis is seen in neglected ulcers or wounds in most parts of the world. Maggots can be seen in large numbers in the suppurating tissue. Traditional methods of treatment include occluding punctum with pork fat, mineral oil, butter, or petrolatum, blocking the spiracles of the larvae and stimulating premature extraction.

Case report

A sixty years old lady of rural, poor socioeconomic background presented with the complaints of pain, itching and formation of vesicles on the left side of scalp, forehead and left upper eyelid of seven days duration. She was diagnosed and managed conservatively as a case of Herpes Zoster Ophthalmicus (left). Nine days later, she again reported with the complaint of ulcer over the left upper eyelid with insects crawling on the floor of the ulcer. There was no history of any systemic disease.

Systemic examination conducted did not reveal any abnormality. The patient was mobile, fully

Figure 1 Ulcer showing maggots on the floor**.**

Figure 2 Maggots being removed. The small figure inside shows the larva.

conscious and well oriented in time space and person.

On examination, a triangular shaped ulcer, measuring 1.5×1.7 cm was seen on medial aspect of left upper eyelid, above medial canthus below the left eyebrow (Figure 1). The margins were inflamed and indurated. The surrounding skin showed healing lesions of herpes zoster. Freely moving maggots were observed on the floor of the ulcer. They had burrowed deep into the superomedial compartment of the orbit. There was scanty blood-stained foul smelling discharge. Ocular examination revealed severe ptosis, conjunctival congestion, dense cataract and ophthalmoplegia. Regional lymph nodes were not palpably enlarged.

The patient had pseudophakia in right eye and her corrected visual acuity was 6/9. There was no other significant relevant finding in right eye.

Investigations revealed normal haemoglobin, neutrophilic leukocytosis, lymphopenia. Urine routine examination revealed traces of protein. All other relevant investigations were within physiological limit. Skiagram of skull did not reveal any area of bone destruction.

Mechanical removal of maggots was undertaken. Topical anaesthesia was applied with 0.5% Proparacaine Hydrochloride (Alcaine) eye drops. The maggots were removed from the ulcer bed with the help of a forceps. All the maggots could not be removed in one sitting as they had burrowed deep into the wound and resisted removal by firmly adhering to the burrows. The wound was cleaned and dressing was applied. The patient was put on systemic antibiotics.

On opening the dressing the next day, more maggots were seen and they were also removed. A total of about 35 maggots were removed in five days. Daily dressing of wound was done. The ulcer healed in three weeks time.

The maggots were identified as larvae of housefly (Musca domestica) (Figure 2).

Discussion

Ophthalmomyiasis is a known clinical entity, varying in presentation from a solitary infestation with signs of irritation only, to the total destruction of the orbit with its conversion to a stinking suppurating cavern filled with crawling maggots.[1] Most commonly, it presents secondarily in necrotic chronically inflamed tissue in exposed parts of the body. The fetor arising from the ulcers and wounds may attract

the flies to deposit their eggs.[1] Myiasis is predisposed by rural background, crowded conditions and poor personal hygiene in debilitated, neglected elderly patients].Healthy tissue and normal healthy individuals are unlikely to suffer from myiasis.[2]

Herpes zoster is a common infection caused by human herpes virus 3 (HHV-3), which mainly affects elderly patients.[3] In the elderly and undernourished, the local eruption often becomes necrotic and healing, which may require many weeks, may be followed by severe scarring.[1] Ocular tissue damage may be direct as a result of cellular infiltration or indirect by denervation and ischaemia, induced by vasculitis.[4]

The key step in the management of patients with myiasis is mechanical removal of maggots. Due to firm adherence to the burrows, the removal of maggots is sometimes quite difficult. For convenience/ ease in removal of maggots, it is important to suffocate the maggots by blocking the spiracles of larvae with petrolaum or turpentine oil[5] or to nacrotize the larvae by using ether.[6] The injection of 2ml of 2% lidocain into the blind end of the cavity may facilitate the non-surgical removal of the larvae. We used white soft paraffin to suffocate and local anaesthetic 0.5% proparacain hydrochloride.

All the maggots could not be removed in one sitting as they had burrowed deep into the orbit. After the total mechanical removal of the maggots along with proper wound care, the ulcer healed in a relatively short duration of 3 weeks.

To our knowledge, there are reports of herpes zoster complicated myiasis[7] but this is the first report from Pakistan.

Conclusion

The skin lesions of herpes zoster in exposed parts be properly followed and looked after so that they do not become infected secondarily and attract flies to deposit their eggs. However, if myiasis occurs, it is not a big deal and does not require specific therapy, simple mechanical removal of maggots leads to early healing of the wound.

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