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Management of Oro Facial Wound Myiasis by Terpentine Oil - A Prospective study

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Abstract

Background and Aim: Compromised health and hygiene can lead to many complications and one among them is or official wound Myiasis. Myiasis is the invasion of living tissues by larvae of flies.

The common predisposing factors for oral Myiasis are the conditions leading to persistent mouth opening along with poor oral hygiene, infections, ulcerative lesions, facial trauma 7 and carcinoma.

Traumatic wounds in or official region when elected by patients themselves and as well as caretaker scan lead to development of Myiasis. The aim of this present study to manage or facial wound Myiasis managed by Terpentine oil along with removal of Myiasis and debridement.

Materials and Methods: All the ten cases of or facial wound Myiasis were viewed. Clinical features, site of wound Myiasis recorded (Fig 1). All cases treated by topical applications of Terpentine oil, debridement of wound by removing loose friable issues fragments and copious irrigation, maggots were removed using non-toothed Addison's tissue forceps (Fig2 and Fig3) followed by wound closure.

Results: A ten cases of traumatic facial wound Myiasis was larvae of Musca Domestic us and treated by manual removal of larvae.

All cases treated by topical applications of Terpentine oil, debridement of wound by removing goose friable issues fragments and copious irrigation, maggots were moved. One year follow-up show edno evidence of recurrence.

Conclusion: We conclude that early management of or facial wound Myiasis with Terpentine oil along with removal of Myiasis and debridement is good treatment modalities

Keywords: Oro Facial Wound, Myiasis, Maggots, and Terpentine Oil.

Introduction

Every human tries to maintain personal hygiene to an extent tha this surround ing environment allows. But sometimes it may not be possible to maintain basic

cleanliness by neglected, poor, old, debilitated and disabled ones. This group is more prone to wound infections and when not cared adequately, can lead to complications. One of such complication can be Myiasis. Myiasis is a rare condition refers to the invasion of living tissues by fly larvae.

'Myiasis' word was coined by Hope in 1840 and is from the Greek 'myia' means 'fly' [1]Zumpt defined Myiasis as 'the infestation of live human or vertebrate animals with larvae of the insect order Diptera (flies), which feed on living or necrotic tissues. [2]Humanmyiasisis mainly found in tropical and under developed countries, however not uncommon in other are as.[3-8]

Myiasis can be classified depending on the condition of the involved tissues) Accident a myiasis; when larvae get ingested along with food, ii) Semi specific Myiasis; when the larva earelai don necrotic tissue of the wound and iii) Obligatory Myiasis; in which larvae affects undamaged skin[9].Based on anatomic site it can be classified as

- Cutaneous Myiasis,
- Myiasis of external orifices and
- Myiasis of internal organs[10]. Clinically it can be classified as
- Primary and
- Secondary[11]. Primary myiasis is caused by biophagous larvae (feed on living tissues) and also called as obligatory myiasis. Secondary myiasis is caused by the necro biophagous larvae (feed on dead tissues) and also called as facultative myiasis.[6,8,12,13] The most common anatomical sites for myiasis are the skin wounds, nose, sinuses, eyes, lungs, ears, anus, vagina and rarely the oral cavity.[14] Whereas cutaneous Myiasis involves invasion of the skin through the wounds. But specific types of flies can even penetrate healthy skin and produce myiasis.[8] Oral Myiasis are condition was described in the literature since 1909 by Laurence.[4,15]

The common predisposing factors for oral myiasis are the conditions leading to persistent mouth opening along with poor oral hygiene, infections, ulcerative lesions, facialtrauma[7] and carcinoma.[12,16]

Most of the patients are being senile,[17] alcoholics, mentally handicapped,[5] cerebral palsied [5,8,11,17] and also reported to be seen in patients living in poor conditions with no age limitations.[6] Droma EB4 et al, in their literature review have mentioned that incidence of Myiasis is more in anterior maxillary region and men are more affected than women.

Traumatic wound sin or of acial region when neglected by patients themselves and as well as caretaker scan lead to development of myiasis.[2,7,18] the present study reviewed ten cases of or official wound Myiasis managed by Terpentine oil along with removal of Myiasis and debridement shows good result with no recurrence.

Materials and Methods

All the ten case so for official wound Myiasis were reviewed. Clinical features, site of wound myiasis recorded (Fig 1). All cases treated by topical applications of Terpentine oil, debridement of wound by removing loose friable tissues fragments and copious irrigation, maggots were removed using non-toothed Addison's tissue forceps (Fig2) followed by wound closure.

Post-operative wound healing was uneventful. The patients were recalled for regular follow up. Few of the larvae were preserved in formalin and subjected to entomo logical examination. These were identified as larvae of housefly, Musca Domestics of Order Diptera.

Results

Out of ten patients in this study, seven were male and three were female. All cases were of low socio-economic

status having poor living conditions. Unhygienic and in sufficient initial wound debridement and dressing might have attracted flies. All cases of wound myiasis were located in orofacial region, six cases were located in mandibular region and three cases were located in maxillary region.

All cases treated by topical applications of Terpentine oil, debride Ment of wound by removing loose friable tissues fragments and copious irrigation, maggots were removed using non-too the Addison's tissue forceps followed by wound closure. Postoperative wound healing was uneventful. The patients were recalled one year for regular follow up. There was no recurrence found.

Discussion

The risk factors for the development of myiasis are suppurative lesions, open wounds, scabs, traumatic wounds, ulcers contaminated with discharges and blood remnants. When these condition sare super -added with debilitation, mental or physical disability and poverty, the chances of myiasis increase.[8].

Review of the available literature on myiasis of oral and perioral region shows that infestation by multiple larvae is common.[4,8] Males are affected more, probably because they tend to spend more time outdoor and tend to neglect their hygiene.[4]

In present study shows that all cases were of low socio-economic status having poor living conditions. Unhygienic and insufficient initial wound debride Ment and dressing might have attracted flies. Since house flie sare common in Indian houses with inadequate sanitation, chances of primary wound myiasis are more.

The life cycle of a fly in larval stage (6-8days) requires aninter mediate host form mechanical support and suitable sub strate to feed on. The larvae have different features which facilitate their anchorage on to the tissue and for burrow ingaction.[14]

The traditional and classical treatment of myiasis is surgical debridement under local anesthesia followed by mechanical removal of maggots.[5,11,17] When there are multiple larvae, local application of various agents like turpentineoil,[5,18]

ethyl chloride, ether,[12] mercuric chloride, creosote, iodoform, chloro form,[8] clove oil, calomel, phenol mixture,[11] gencian violet,[13] alcoholic solution in association with to bacco, camphor, sodium Hy pochlorite[17] is advocated.

These agents are supposed to asphyxiate the aerobic larvae and force them to amore superficial position making manual removal easier with less damage to tissues and larvae as well.[4,12] Care should be taken not to rupture the maggots as it might cause allergic or foreign body reaction and secondary in fection.[8,12] Systemic ivermect in has been used with favourable results in some cases.[11,14,17]

- In the present cases, Maggots separate the necrotic tissue from the living tissue, making surgical debride Ment of the wound easier. The proposed mechanisms of maggot-induced wound healing included
- continuous flushing or irrigation of the wound by copious exudates formed by the host in response to the maggots;
- killing, ingestion, and digestion of bacteria by the maggots;
- secretion of allantoin (component of fetalallantoic fluid);
- the rapid formation of granulation tissue stimulated by the continuous larva movement in the wound:
- liquefaction of necrotic tissue by the maggotsandvi) maggot extracts stimulated significant increase in total human fibro blasts.[2] It is hoped that this review will be

useful in the evaluation and treatment of patients with myiasis. Histories and physical examinations must be always comprehensive.

- The condition of the patient's hygiene and clothing must be noted. Wounds should be thoroughly cleansed and tetanus immune prophylaxis should be updated as necessary. Follow-up within a week should be a standard practice and anti-biotics need to be prescribed to prevent bacterial in fection.

Conclusion

Condition like myiasis of oro facial region can be prevented by educating the susceptible group about personal hygiene, primary care of any wound, control off Ly population and maintenance of sanitation of the surroundings. Special care should be taken for dependent patients. Dental surgeon should be aware of such condition and its management.

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Legend Figures

Fig. 1 Oro facial wound

Fig. 2: Maggots Revoval