Nasal and ophthalmomyiasis: case report

I S Millie, P K S Gubbi, H C Cocks

Abstract
Objective: We report a rare case of a 51-year-old woman with ocular and nasal infestation by Oestrus ovis.

Method: Clinical case report and review of current literature regarding nasal and ophthalmomyiasis.

Results: Myiasis is infestation of the tissues and organs of vertebrates by certain dipteran fly larvae. Oestrus ovis myiasis is endemic in the region from North Africa to South Asia, but few cases are reported within the UK. A 51-year-old patient presented and was treated successfully in Sunderland Royal Hospital for combined ocular and nasal infestation with Oestrus ovis.

Conclusions: Oestrus ovis has a largely subtropical distribution; however, it is important to remember the diversity of disease which can present within the UK from an external source. This point is illustrated by this rare case, which highlights the fact that prompt treatment can avoid poor outcomes for our patients.

Key words: Myiasis; Nose; Ophthalmomyiasis; Oestrus Ovis

Introduction
Myiasis is a parasitic disease caused by the larvae of numerous dipteran fly species, including the sheep bot fly Oestrus ovis. This species is an obligate parasite in the nasal cavities and frontal sinuses of sheep, but may also cause infestation in humans. The primary site of infestation is usually the nose, ears, eyes and surrounding skin, but can also include the pharynx and genitourinary tract. Involvement of the eye and nose is termed ophthalmomyiasis and nasal myiasis, respectively. Ophthalmomyiasis is further subdivided into internal and external types, dependent on the presence of intra-ocular penetration.

Both nasal and ocular myiasis are rarely reported in the community, with regular saline irrigation.

Case report
A 51-year-old woman presented to the accident and emergency department at Sunderland Royal Hospital, following referral by the ophthalmology team, complaining of a foreign body sensation in the right nasal cavity for the preceding two days.

She had initially described a seven-day history of feeling something in the right eye, after returning from a cruise in Morocco. The eye had become progressively itchy and congested, despite irrigation with topical antibiotics. A subsequent ophthalmology review (at Sunderland Eye Infirmary) had resulted in the removal of three larvae from the right eye under microscopic guidance; these larvae were sent for analysis.

Ten days after returning from Morocco, she had developed nasal symptoms and was referred to the ENT team for review.

On initial examination, no larvae were found within the nose, and the patient was treated conservatively in the community, with regular saline irrigation.

From the Department of Otolaryngology, Head and Neck Surgery, Sunderland Royal Hospital, UK.

Accepted for publication: 22 October 2009. First published online 13 January 2010.
Myiasis is a parasitic disease caused by the larvae of numerous dipteran fly species, including the sheep bot fly Oestrus ovis.

This paper describes a rare case of a 51-year-old woman with ocular and nasal O. ovis infestation.

Nasal myiasis is treated by removal of larvae, treatment with antiparasitic agents (under specialist advice) and nasal decongestants.

Ocular myiasis is characterised by itching, burning, pain, redness and tearing in the affected eye. In extreme cases, the larvae may invade the globe of the eye, causing retinal damage and blindness. Penetration of the sinus mucosa causes pain, swelling and frontal headache. Nasal symptoms include foreign body sensation, itching, rhinorhoea and sneezing. Cases of oral and pharyngeal myiasis have also been reported.

Management of superficial O. ovis ocular infections involves removing the larvae under microscopic examination with the aid of topical anaesthesia to loosen larval attachments. Further treatment includes antibiotic and corticosteroid therapy to reduce the inflammatory response. Similarly, nasal myiasis is treated by removal of larvae, treatment with antiparasitic agents (under specialist advice) and nasal decongestants. Follow-up examination is advisable to exclude complications or the existence of additional larvae.

Oestrus ovis myiasis has a broad subtropical distribution, with the majority of reported cases occurring in the area from North Africa through to the Middle East and Southern Asia. Cases of myiasis within the UK, either indigenous or imported, remain rare. However, a history of recent travel to endemic areas should prompt a greater level of suspicion, and a detailed examination. Indeed, it is important for all healthcare providers to be aware of the diversity of disease which can present within the UK from an external source, as the potential risks from impromptu treatment can result in poor outcomes for our patients.

Acknowledgements

We thank Dr A W Berrington, Consultant Microbiologist, Sunderland Royal Hospital, and The London School of Hygiene and Tropical Medicine for their advice in managing this unusual case and assistance in identification of larvae.

References


Address for correspondence:
Miss Helen Cocks, Consultant Otolaryngologist, Sunderland Royal Hospital, Kayll Road, Sunderland SR4 7TP, UK.

E-mail: Helen.Cocks@chs.northy.nhs.uk

Miss H Cocks takes responsibility for the integrity of the content of the paper.

Competing interests: None declared