Light and Scanning Electron Microscopy Studies of Oestrus ovis First instar Maggot Causing Ophthalmomyiasis.

Hazem Abdel-motaal1, Hanaa Y. Bakir, Doaa A. Yones, Rasha A. H. Attia

Abstract:

Background: External ophthalmomyiasis refers to superficial infestation that involves the lids and conjunctiva in man by fly larvae (maggots of the order Diptera). Ophthalmomyiasis is often a benign self-limiting disease. Oestrus ovis (O. ovis) is the most common cause affecting mainly persons in rural areas such as shepherds and farmers. Numerous cases of external ophthalmomyiasis due to this fly were reported from Africa, Middle East, Australia, North America, Southern Europe and Egypt. Objective: The aim of this study is to describe the morphological characteristics of O. ovis 1st stage larvae using light microscopy (LM) and scanning electron microscopy (SEM) and to correlate between these larval structures and their pathogenesis. Material and methods: A 24 years-old - man presented with severe symptoms of conjunctivitis. On examination, 5 small sized larvae were observed in the bulbar conjunctiva. They were picked up, described and documented photographically by LM and SEM. Results: The larvae were identified as O. ovis 1st stage larvae. They showed characteristic mouth parts, surrounded by crown shaped spines. More distinctive features revealed by SEM were mirror image papillae on the ventral side and rows of currycomb-shaped spines on the body segments. Conclusion: This study highlighted particular diagnostic structures of the anterior and posterior ends of O. ovis 1st stage larvae that may aid in larval identification, and explain their mechanism of pathogenesis. Most important is the early diagnosis and treatment. KEY WORDS: Oestrus ovis, Myiasis, Ophthalmomyiasis, Egypt.

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