Progressive conjunctival scarring, a condition not to be missed

BY DR MOHAMMED ZIAEI*

Introduction
The conjunctiva, a thin translucent layer of tissue lining the ocular surface, contributes to homestasis of the tear film and is a protective barrier towards infection. Progressive conjunctival cicatrisation is a rare, but important clinical entity that needs to be diagnosed promptly as it can be sight-threatening. The condition usually results from an imbalance in the physiological interaction between the lids, tears, mucosal and epithelial layers of the ocular surface. This article reviews some of the important diagnostic and management concepts when dealing with cicatrizing conjunctivitis (CC).

 Conjunctival cicatrisation
Conjunctival scarring usually results from chronic ocular surface inflammation. A large number of stimuli such as chemical and physical insults, infection, and systemic conditions can lead to conjunctival cicatrisation. If the ocular surface inflammation is not controlled, this can lead to cicatrization of the conjunctival surface.

The majority of patients with non-progressive conjunctival cicatrisation have suffered a previous episode of severe ocular surface inflammation, typically adenoviral conjunctivitis with secondary sequelae, such as symblepharon formation. These patients are often seen when they present for a routine eye examination and are typically asymptomatic upon presentation.

Patients with progressive cicatrization are, however, usually symptomatic and present with red, gritty, uncomfortable eyes. Most patients with progressive CC have mucous membrane pemphigoid (MMP), a systemic autoimmune blistering dermatosis that affects the ocular, oropharyngeal and genital mucosal membranes and skin with progressive scar formation. MMP can also affect the ocular surface in about 70% of cases (ocular MMP or OMM). However, there are many other conditions that can lead to a clinical picture of conjunctival scarring\(^1\). Table 1 provides an overview of the conditions that can lead to CC.

Patient demographics
Patients with CC are usually females with an average onset of disease between 60 to 70 years. In one prospective study, OMM accounted for 61% of patients with CC whilst SJS/TEN accounted for 20%. This equates to an incidence of 0.8 and 0.2 per million population\(^2\).

Diagnosis
CC presents a diagnostic challenge as many of the presenting conditions present with a similar clinical appearance. Despite the similarities in the clinical characteristics, a carefully taken history as well as ocular and adnexal examination can help the clinician in making the correct diagnosis, as can appropriate investigations, providing their limitations are understood.

History
A careful history can often help in making a correct diagnosis as many of the disorders listed in Table 1 have characteristic presenting symptoms. A thorough history, including direct questions about past medical history, as well as risk factors associated with scarring – e.g. a history of previous systemic inflammatory disease such as sarcoidosis, previous purulent conjunctivitis, chronic topical eye drop use – will help the clinician distinguish between a systemic or local cause for CC. It’s also important to try and establish the presence of any systemic diseases, symptoms such as difficulty with swallowing, breathing or sexual intercourse which can affect mucous membrane linings of the mouth, oesophagus, trachea, nose, vagina and rectum.

Table 1. Conditions associated with cicatrising conjunctivitis.

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<th>Classification</th>
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References

About the author
Dr Mohammed Ziaei completed his ophthalmic training at Moorfields Eye Hospital in London and is currently in his second year as a cornea & anterior segment fellow at the University of Auckland.

Fig 1. Extensive symblepharon formation in a patient with OMM.

Fig 2. Loss of the caruncle and significant Meibomian gland dysfunction.

Fig 3. Erosion of the fornix capsule in a patient with MMP.