Distichiasis

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Abstract
A 7 yr old female patient came to the OPD having diagnosed as Pierre Robin Syndrome showed sparse and curly scalp hair with eversion of the lower lids and distichiasis, cleft palate, micrognathia and severe oligodontia and conical teeth, with no history of trauma or any previous ocular surgery, having been operated for cleft palate 3 yrs back, underwent splitting of the anterior and posterior lamellae of both eye lower lids with cryotherapy (double freeze thaw technique) in may 2007. There was no significant maternal, personal or family history. Her both eye best corrected visual acuities were 6/6, with both eye lower lids showing abnormal second row of eyelashes.

Introduction
Distichiasis is a rare disorder defined as the abnormal growth of lashes from the orifices of the meibomian glands on the posterior lamella of the tarsal plate. Two types of distichiasis are identified, acquired and congenital. In the acquired form, most cases involve the lower lids. Lashes can be fully formed or very fine, pigmented or nonpigmented, properly oriented or misdirected. The metaplasia of meibomian glands and abnormal growth of lashes from these glands, secondary to severe chemical burn, Stevens-Johnson syndrome, ocular cicatricial pemphigoid (OCP), or chronic blepharoconjunctivitis, can cause acquired distichiasis. The congenital form of distichiasis is autosomal dominant with complete penetrance. It can be isolated or associated with ptosis, strabismus, congenital heart defect, or mandibulofacial dysostosis. This defect may be related to the epithelial germ cells failure to differentiate completely to meibomian glands, instead they become pilosebaceous units.1

Case Report
A 7 yr old female patient came to the OPD having diagnosed as Pierre Robin syndrome showed sparse and curly scalp hair with eversion of the lower lids and distichiasis, cleft palate, micrognathia and severe oligodontia and conical teeth, having been operated for cleft palate 3 yrs back. There was no significant maternal, personal or family history.

On examination, her both eye best corrected visual acuities were 6/6, with both eye lower lids showing abnormal second row of eyelashes and ectropion of the lower lids, having abnormally arranged conical teeth and jaws were micrognathic. Patient underwent splitting of the anterior and posterior lamellae of both eye lower lids with cryotherapy in May 2007.

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Fig. 1 : Patient with features of micrognathia, severe oligodontia and conical teeth.
Pathophysiology
Distichiasis affects the lower as well as the upper lids. When these abnormal lashes come in contact with the cornea, they cause severe irritation, epiphora, corneal abrasion, or even corneal ulcers.

Frequency
It is a rare condition seen in all ethnic backgrounds with no sex discrimination and in all ages.

Clinical Relevance

History
Family history of distichiasis may or may not be present.
Previous history including Stevens-Johnson syndrome, ocular cicatricial pemphigoid (OCP), trauma or surgery may be available.

Physical
Abnormal lashes as a second row of hair from the meibomian gland orifices are noted on slit lamp examination. The cornea epithelia on slit lamp may show defects or abnormalities.

Differentials
Entropion
Trichiasis
Epiblepharon
Lid scar
Chronic blepharoconjunctivitis
Cicatricial conjunctivitis

Treatment
Medical: Lubricants and bandage contact lenses are used temporarily to relieve symptoms. Definitive treatment is removal of the abnormal eyelashes by Mechanical epilation, but the eyelashes re-grow within 4-6 weeks.²

Surgical

Direct surgical excision by wedge resection, or tarso-conjunctival approach.
Complications of surgical interventions are haemorrhage, infection, wound dehiscence, lid margin deformities, entropion or ectropion, and regrowth. Adequate electrocautery, especially for marginal arcade vessel, can reduce the chance of haemorrhage.

The permanent treatments of distichiasis include the following:

Electrolysis This method is ideal for cases with few aberrant eyelashes. A fine 30-gauge electrode is used to deliver low current to each hair follicle. Visualization of the hair shaft is crucial. If the treatment is adequate, the eyelashes can be easily wiped with a cotton swab or epilated with a forceps. Recurrent rate with this method is high. Eyelid notching and focal madarosis is seen with aggressive treatment.

Cryotherapy: This method results in a more permanent treatment of misdirected eyelashes. Since treatment is not very localized, the area of aberrant cilia should be at least slightly larger than the beveled-tipped cryoprobe. Permanent destruction of follicles can be achieved with freezing the follicles to the temperature of –20° C by placing the tip directly on the anterior tarsal surface.

Fig. 2 : Post cryotherapy with lid splitting.
Combining lid splitting and cryotherapy (double freeze-thaw technique) has a success rate of 95%. In this technique the lid margin is split into anterior and posterior lamellae with cryo application on the anterior lamellae having distichiasis eyelashes. Complications of this procedure include depigmentation of the skin, eyelid notching, madarosis, severe postoperative pain, oedema, symblepharon, necrosis, and regrowth.

Argon laser ablation: This procedure is not widely used, and it is only useful for few aberrant cilia. The laser settings are as follows: Power of 1000-1500 mW; spot size of 50-100 µ and duration of 0.1-0.2 sec. Complications of this procedure are similar to complications of electrolysis. Recurrence rate for electrolysis and argon laser ablation vary from 12-41%.

Diode laser: The 810 nm diode laser has been used to treat abnormal lashes. The pulse length used is approximately 50 ms, and the energy intensity is approximately 50 J/cm². For best results, 4-5 treatments are needed 4-6 weeks apart.

Medical/Legal Pitfalls

Constant rubbing of lashes against the cornea, especially in the acquired type of distichiasis, can cause corneal epithelial defect, corneal ulcers, or corneal scars. Treatment of distichiasis in a timely fashion is extremely important.

Prior to surgical treatment of distichiasis, patients need to be informed of the complications, especially the recurrence rate and lid deformities. Patients should understand all of the complications and even the treatment of them, if any are present.

References


Treatment of Extensively Drug-Resistant Tuberculosis

Salmaan Keshavjee and colleagues achieved a 48% cure or treatment completion rate for extensively drug-resistant tuberculosis (XDR –TB), despite the fact that 96%, 46% and around 60% of the patients with XDR-TB were resistant to the second-line antitubercular drugs ofloxacin, capreomycin, and ethionamide, respectively.

Linezolid, a new drug in the oxazolidinone class, and moxifloxacin are promising additions to the antitubercular drug armamentarium.