ophthal Focus

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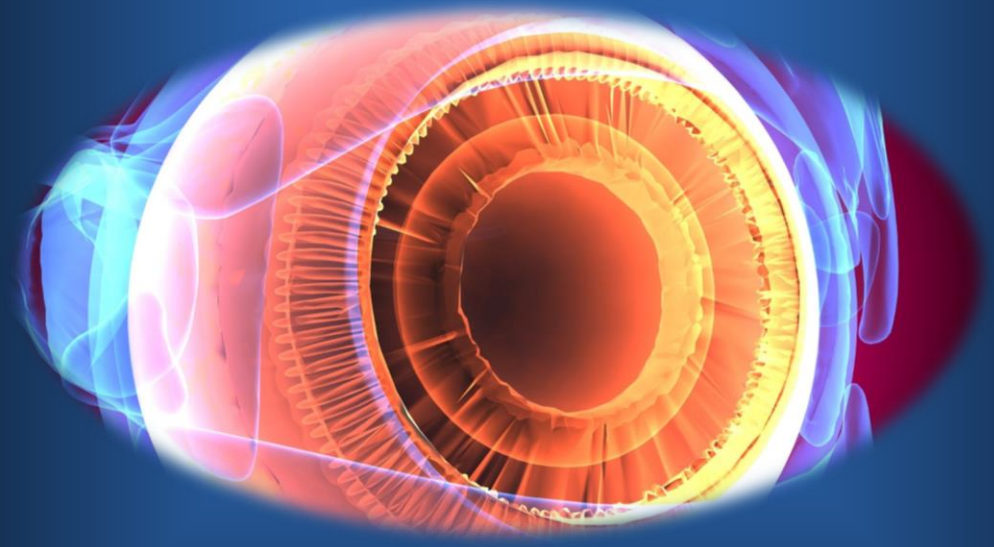


Dear Doctor,

Greetings from Micro Labs Limited. We are happy to bring you 'Ophthal Focus' which contains latest and interesting news in the field of Ophthalmology.

This issue contains

- Lacrimal Gland Hamartoma (Formerly Termed Dacryoadenoma)
- Young Adults With Anterior Ischemic Optic Neuropathy: A Multicenter Optic Disc Drusen Study
- Minor salivary gland transplantation for severe dry eye disease due to cicatrising conjunctivitis

Should you require any specific article or medical information, please feel free to contact us at medicalservices@microlabs.in
Looking forward to your valuable feedback

Best Regards,
Medical Team, Micro Labs Limited

Lacrimal Gland Hamartoma (Formerly Termed Dacryoadenoma)

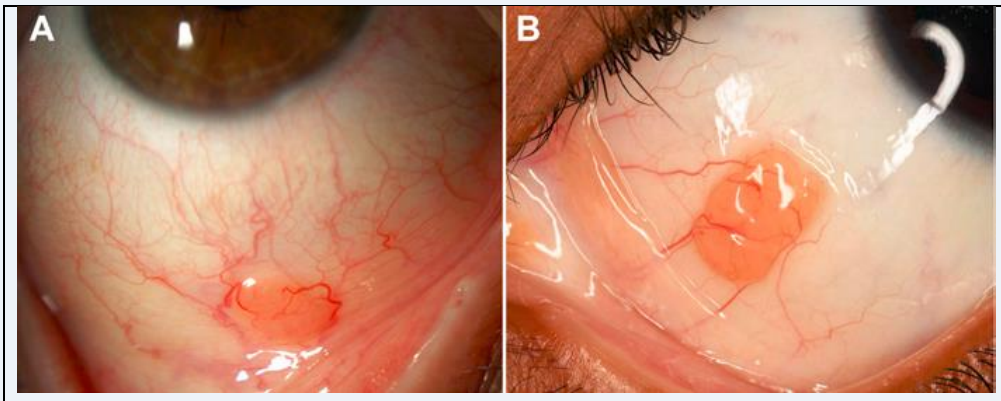
Since the original description of "dacryadenoma" by Jakobiec and associates, the data on this unusual epibulbar lacrimal gland lesion remain sparse. The aim of this study was to characterize clinically, morphologically, and immunohistochemically this isolated epibulbar lacrimal gland lesion.

In this retrospective observational case series Institutional pathology records between 2000 and 2019 were searched for all cases of isolated epibulbar lacrimal gland lesions. Tissue from 3 normal lacrimal glands and 1 complex choristoma were included for comparative analysis. Clinical, histopathologic, and immunohistochemical findings were recorded.

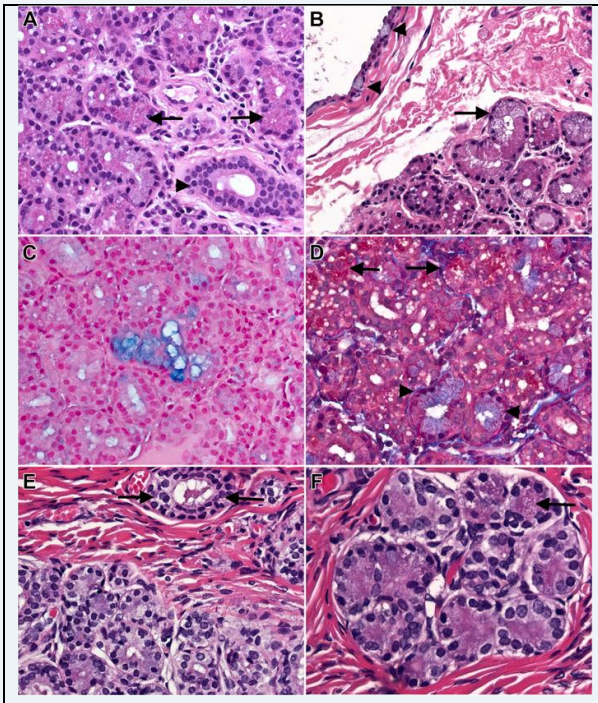
When compared with the normal lacrimal gland and complex choristoma, all isolated epibulbar lacrimal gland lesions were composed predominantly of variably dilated, branching tubular structures.

Four patients with isolated epibulbar lacrimal gland lesions, 2 male and 2 female, with a median age of 18 years (range, 12-57) were identified. All patients presented with recent onset of unilateral pink-to-orange, well-circumscribed subepithelial juxtaforniceal (3/4, 75%), or nasal (1/4, 25%) bulbar conjunctival nodules, which were asymptomatic (3/4, 75%) or associated with foreign body sensation (1/4, 25%). When compared with the normal lacrimal gland and complex choristoma, all isolated epibulbar lacrimal gland lesions were composed predominantly of variably dilated, branching tubular structures with pseudo-apocrine snouts, and either totally

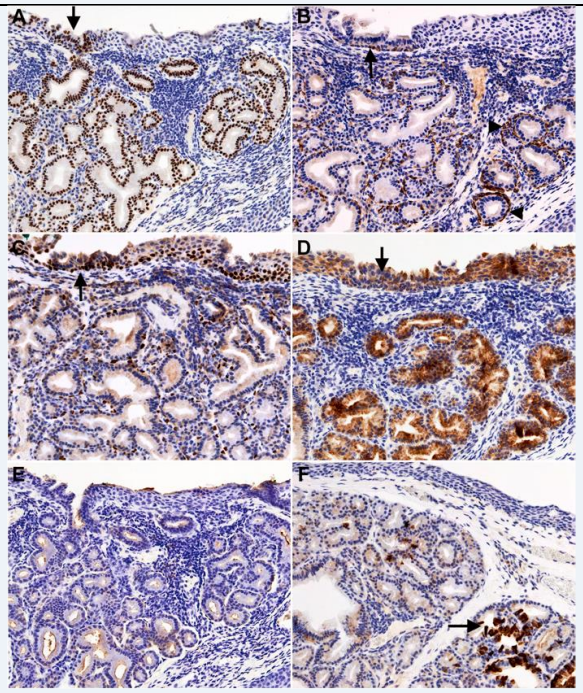
absent (2/2, 50%) or rare (2/2, 50%) ducts and rare acinar zymogen granules (3/4, 75%).



Clinical characteristics of isolated epibulbar lacrimal gland lesions



Morphologic findings in normal lacrimal gland tissue and ectopic lacrimal gland of complex choristoma



Immunohistochemical features of the isolated epibulbar lacrimal gland lesion

The study confirms that a subset of isolated epibulbar lacrimal gland lesions differs morphologically and immunohistochemically from normal lacrimal

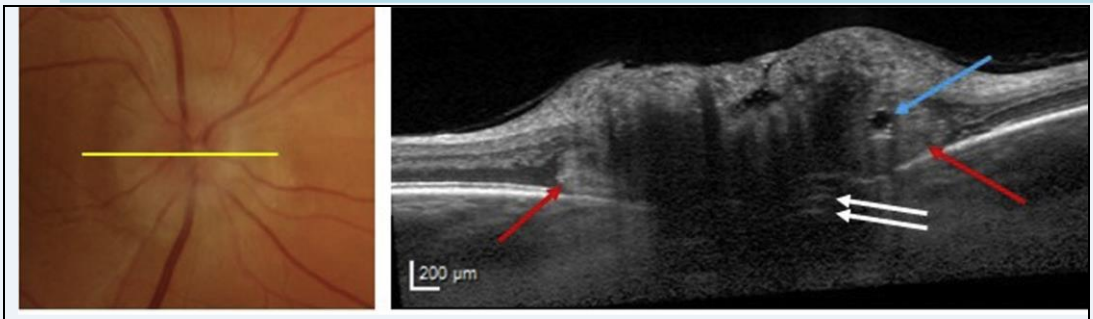
gland tissue and the lacrimal gland in a complex choristoma. These differences range from subtle to overt, suggesting that isolated epibulbar lacrimal gland lesions may have originated from precursor cellular elements indigenous to the conjunctiva (hamartia) and grew into disorganized lacrimal gland tissue.

Source: Milman T et al. Am J Ophthalmol. 2020 Sep;217:189-197. doi: 10.1016/j.ajo.2020.04.015.

Young Adults With Anterior Ischemic Optic Neuropathy: A Multicenter Optic Disc Drusen Study

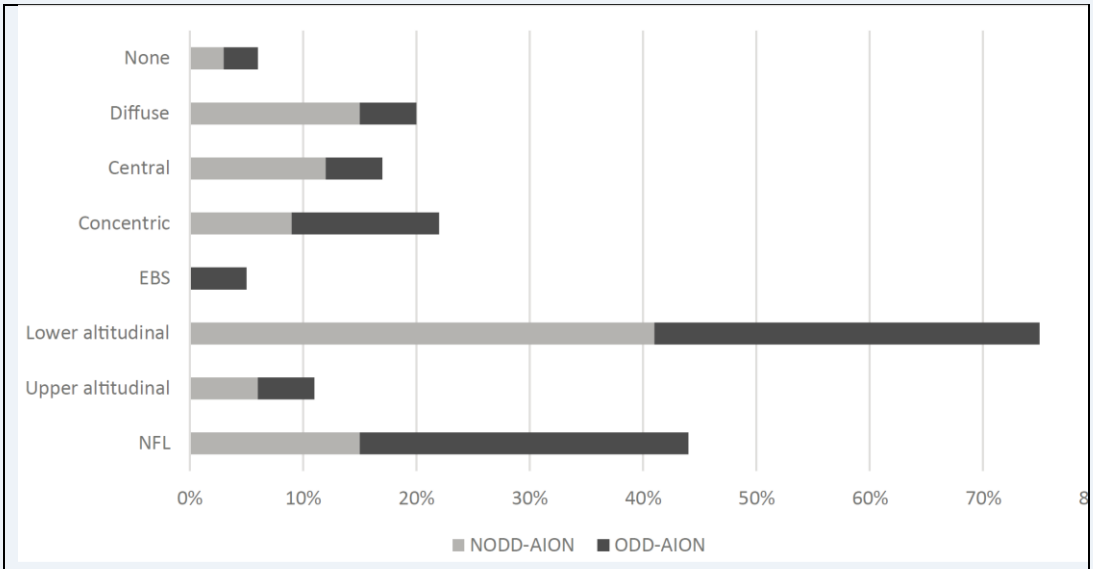
Optic disc drusen (ODD), present in 2% of the general population, have occasionally been reported in patients with nonarteritic anterior ischemic optic neuropathy (NA-AION). The purpose of this study was to examine the prevalence of ODD in young patients with NA-AION. This was a retrospective, cross-sectional multicenter study. All patients with NA-AION 50 years old or younger, seen in neuro-ophthalmology clinics of the international ODDS (Optic Disc Drusen Studies) Consortium between April 1, 2017, and March 31, 2019, were identified. Patients were included if ODD were diagnosed by any method, or if ODD were excluded by enhanced-depth imaging optical coherence tomography (EDI-OCT) using ODDS Consortium guidelines. NA-AION eyes with ODD were termed "ODD-AION"; those without were termed "NODD-AION".

ODD may be an independent risk factor for the development of NA-AION, at least in younger patients.



Diagnosis of ODD and ODD-AION.

(Left) Fundus photograph of the right optic nerve head of a 44-year-old man with a few days' history of sudden visual loss due to NA-AION. The yellow line on the fundus photograph indicates the EDI-OCT scan position. Diffuse optic disc edema is seen but no ODD are visible on the surface. (Right) On EDI-OCT, performed the same day, it is possible to visualize ODD (blue arrow), PHOMS (red arrow), and prelaminar, hyperreflective lines (white arrows). EDIOCT [enhanced depth imaging optical coherence tomography; NA-AION [nonarteritic anterior ischemic optic neuropathy; ODD [optic disc drusen; PHOMS [peripapillary hyperreflective ovoid mass-like structure



Percentage of eyes with different types of visual field defects in NODD-AION and ODD-AION.

EBS[enlarged blind spot; NA-AION [nonarteritic anterior ischemic optic neuropathy; NFL [nerve fiber layer; NODD-AION [NA-AION not associated with ODD; ODD [optic disc drusen; ODD-AION [NA-AION associated with ODD.

A total of 65 patients (127 eyes) with NA-AION were included (mean 41 years old). Of the 74 eyes with NA-AION, 51% had ODD-AION, whereas 43% of fellow eyes without NA-AION had ODD (P = .36).

No significant differences were found between ODD-AION and NODD-AION eyes in terms of Snellen best-corrected VA or perimetric mean deviation. According to EDI-OCT results, 28% of eyes with NODD-AION had peripapillary hyperreflective ovoid mass-like structures (PHOMS); 7% had hyperreflective lines, whereas 54% with ODD-AION had PHOMS; and 66% had hyperreflective lines ($P = .006$ and $P < .001$, respectively). Most of these young NA-AION patients had ODD. This indicates that ODD may be an independent risk factor for the development of NA-AION, at least in younger patients. This study suggests ODD-AION be recognized as a novel diagnosis.

Source: Hamann S et al. Am J Ophthalmol. 2020 Sep;217:174-181. doi: 10.1016/j.ajo.2020.03.052

Minor salivary gland transplantation for severe dry eye disease due to cicatrising conjunctivitis

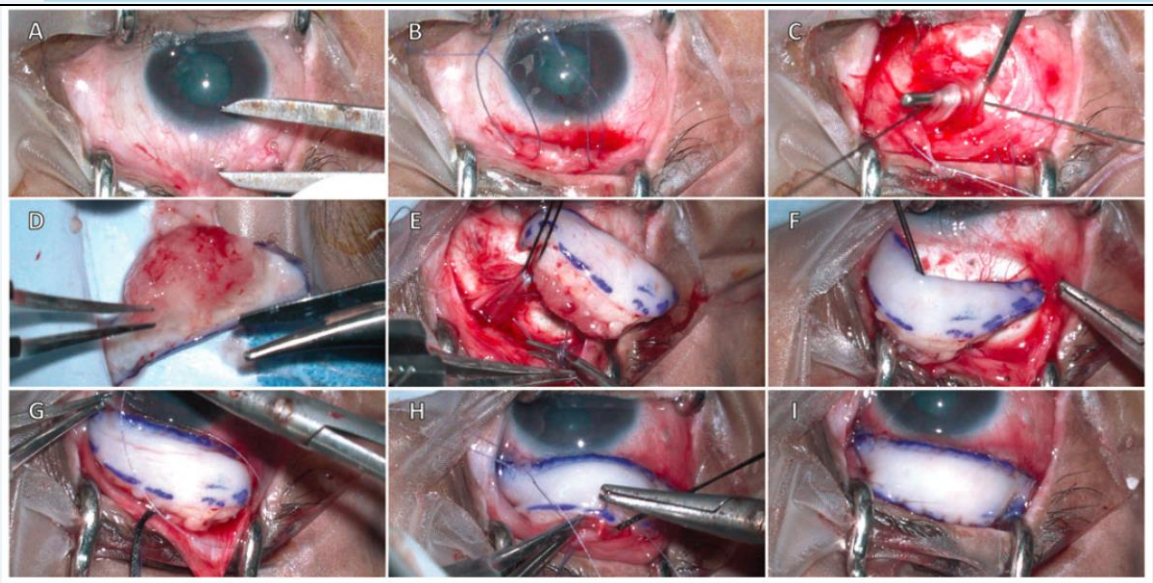
Dry eye disease (DED) is defined by the loss of homoeostasis of the tear film in the presence of characteristic symptoms and signs, as well as tear film instability, hyperosmolarity, ocular surface inflammation and epithelial damage. Minor salivary gland transplantation (MSGT) is a relatively simple surgical procedure that has been shown to be useful in improving symptoms and ocular surface lubrication in severe DED. Earlier surgical techniques have described transplantation of minor salivary glands onto the tarsal surfaces of the eyelids or into the fornices. There is some concern that the early benefits of MSGT are not sustained over many months or years, possibly due to progressive subconjunctival fibrosis.

This study report the clinical outcomes of autologous minor salivary gland transplantation (MSGT) for the treatment of severe dry eye disease caused by

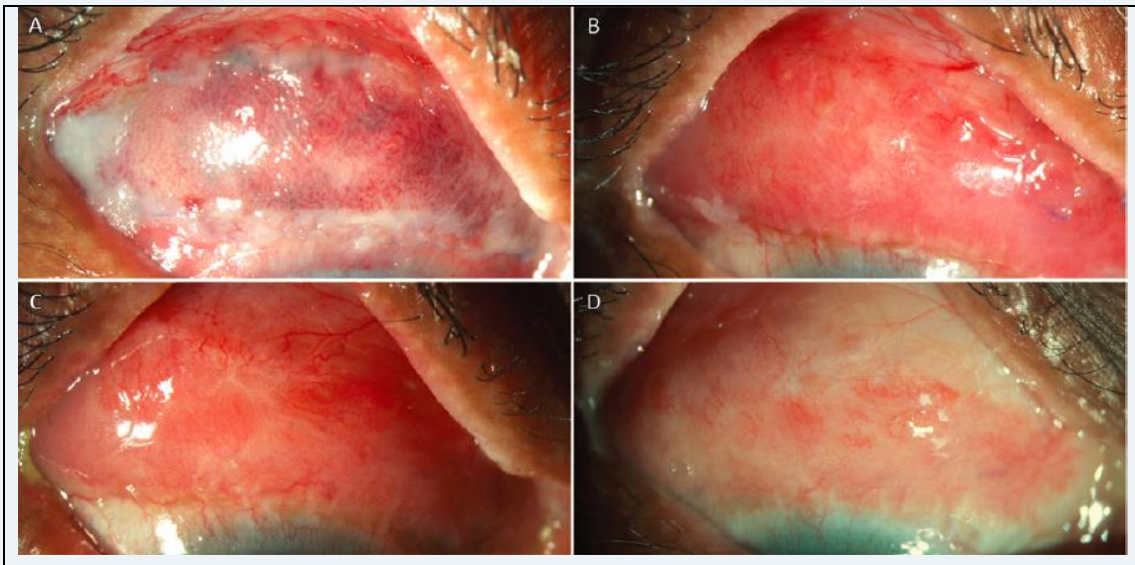
cicatrising conjunctivitis. This was a retrospective case series of patients undergoing MSGT at four different centres from 2016 to 2018. The technical modifications included en bloc harvesting of a 20 mm×15 mm mucosa–gland–muscle complex and fixation of the glands to the superior bulbar surface anchored to the superior rectus muscle. The primary outcome measure was improvement in best-corrected visual acuity (BCVA). Secondary outcome measures were change in Schirmer test scores and grades of conjunctival and corneal fluorescein staining, grades of corneal neovascularisation, opacification and keratinisation.

The study demonstrates that with a modified technique of MSGT, there was a significant improvement in ocular surface lubrication along with progressive decrease in ocular surface staining parameters, corneal neovascularisation and corneal opacification with time.

21 eyes of 19 patients underwent MSGT, with a median follow-up duration of 3 years. The median BCVA improved from a baseline value of 20/500 to 20/125 at 1 year (p=0.0004) and 20/80 at 3 years (p=0.0002) after surgery. The proportion of cases with BCVA ≥20/200 improved from 38% at baseline to 67% at 1 year (p=0.0294), 78% at 2 years (p=0.0227) and 93% at 3 years (p=0.0015) after surgery. There was a significant improvement (p<0.0036) in Schirmer scores, conjunctival and corneal staining scores as well as grades of corneal neovascularisation and opacification after surgery. There were no serious sight-threatening complications in the transplanted eyes or at the donor site. Long-term improvement in the visual acuity, ocular surface environment, and keratopathy was noted after MSGT performed in severely dry eyes using a modified technique.



Surgical technique of minor salivary gland transplantation. After fixing the globe in downgaze, a 16 mm long incision is made through the conjunctiva and Tenon's tissue 10 mm posterior to the limbus, 8-0 polyglactin sutures are placed through the posterior lip of the incision and the superior rectus muscle is isolated (A–C). A block of tissue containing oral mucosa, connective tissue, labial salivary glands and a sliver of muscle is harvested en bloc, trimmed to size, placed on the recipient bed and secured to the superior rectus muscle with a 6-0 polyglactin suture with the mucosa oriented outwards (D–F). The mucosal surface is sutured to the surrounding conjunctiva suing 8-0 polyglactin sutures (G–I).



Postoperative appearance of minor salivary gland transplant, after 1 day (A), 6 weeks (B), 1 year (C) and 3 years (D).

The study demonstrates that with a modified technique of MSGT, there was a significant improvement in ocular surface lubrication along with progressive decrease in ocular surface staining parameters, corneal neovascularisation and corneal opacification with time. This led to an improvement in visual acuity in most eyes. We conclude that MSGT may be offered in cases of severe DED associated with cicatrising conjunctivitis with the aims of improving the ocular surface environment and preventing progressive keratopathy.

Source: Vazirani J, et al. Br J Ophthalmol 2020;0:1–6. doi:10.1136/bjophthalmol-2020-316611