

## OP-9 SUBCONJUNCTIVAL SILICONE OIL – PRESENTATION, HISTOLOGY AND SURGICAL MANAGEMENT

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10.1136/bmjophth-2022-BCM.7

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**Objective** To describe the clinical and histological findings in subconjunctival silicone oil leakage, and a surgical technique for its management.

**Method** A 60-year-old woman with a chronic macula-off detachment underwent two pars plana vitrectomies four months apart. The silicone oil inserted during the first was replaced by heavy silicone (Oxane HD) at the second, with unsutured sclerostomy ports. One month later silicone oil cysts were noted under the conjunctiva.

**Results** Symptoms were grittiness, dryness and heaviness with occasional severe pain. Multiple oil globules 0.2 – 2mm in diameter were tightly packed beneath the conjunctiva in two quadrants, extending from limbus to peripheral bulbar conjunctiva.

Tenons tissue containing silicone globules was isolated by dissecting planes superficially, immediately beneath the conjunctival basement membrane, and deep, immediately above the sclera. The tissue sheet was mobilised and excised posteriorly at the junction with healthy tissue.

Histology revealed sheets of connective tissue with densely packed tiny lacunae, and intermittent large lacunae with fibrous walls. Inflammatory cells were scattered in between.

**Discussion** Injectable medical grade silicone oil is only approved for intravitreal use. When injected into breasts, buttocks or face, or following implant rupture, it can migrate causing inflammation, contracture, calcification, embolism and death. It is difficult to remove surgically as it is viscous and adherent, requiring surfactants.

**Conclusion** Leakage of silicone oil from a sclerostomy is a rare complication of intravitreal use. It densely infiltrates subconjunctival tissues, causing irritation and heaviness. With careful dissection, the tissues can be removed en bloc with resolution of symptoms.

## OP-10 GUT MICROBIOTA DYSBIOSIS AS A DRIVER OF INFLAMMATION IN OCULAR MUCOUS MEMBRANE PEMPHIGOID

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10.1136/bmjophth-2022-BCM.8

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**Objectives** Mucous Membrane Pemphigoid is an orphan multi-system autoimmune scarring disease involving mucosal sites, including the ocular surface (OcMMP) and gut. The gut microbiome plays a critical role in the development of the immune system. This study examines the relationship between gut microbiome diversity and ocular inflammation in patients with OcMMP.

**Methods and Analysis** Gut microbiome profiles between OcMMP patients (n=49) and healthy controls (n=40) were compared by extracting DNA from faecal samples and amplified for the V4 region of the 16S rRNA gene followed by Illumina Miseq platform sequencing. Sequencing reads were processed using the bioinformatics pipeline available in the mothur v.1.44.1 software.

**Results** Using multivariable model and adjustment for participant factors, OcMMP cohort was found to be associated with lower number of operational taxonomic units (OTUs) and Shannon Diversity Index when compared to healthy controls. OcMMP OTUs were found to be significantly correlated with both the bulbar conjunctival inflammation score (p=0.03) and the current use of systemic immunotherapy (p=0.02). Linear discriminant analysis effect size scores found Streptococcus and Lachnospirillum enriched in OcMMP. By contrast, healthy controls were enriched with Oxalobacter, Clostridia uncultured genus-level group (UCG) 014, Christensenellaceae R-7 group and butyrate-producing bacteria such as Ruminococcus, Lachnospiraceae, Coprococcus, Roseburia, Oscillospira-ceae UCG 003, 005, NK4A214 group (Log10 LDA score <2, FDR-adjusted p<0.05).

**Conclusion** In conclusion, OcMMP patients have gut dysbiosis that correlated with bulbar conjunctival inflammation and the use of systemic immunotherapies. This provides a framework for future longitudinal deep phenotyping studies on the role of the gut microbiome in the pathogenesis of OcMMP.

## REFERENCE

1. Low L, Suleiman K, Shamdass M, Bassilious K, Poonit N, Rossiter AE, Acharjee A, Loman N, Murray PI, Wallace GR, Rauz S. Gut dysbiosis in ocular mucous membrane pemphigoid. *Front. Cell. Infect. Microbiol.* 2022;12:780354. <https://doi.org/10.3389/fcimb.2022.780354>

## Poster abstract presentation

### P-12 A CASE OF DESCOMET'S MEMBRANE DETACHMENT FOLLOWING PENETRATING KERATOPLASTY FOR KERATOCONUS

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10.1136/bmjophth-2022-BCM.9

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**Objective** To present an uncommon case of Descemet's (DM) detachment 20 years following PK for keratoconus. The detachment spontaneously resolved with conservative management.

To review the literature and published case reports for the clinical course, prognosis, and managements employed for DM detachment following PK.

**Methods and Analysis** Case presentation of a patient presenting to our department and review of the literature.

**Results** Our patient presented with a spontaneous DM detachment 20 years after an uncomplicated PK for keratoconus. Imaging showed recurrence of corneal ectasia inferiorly, which would give this patient a poorer prognosis and higher risk of re-detachment after surgical intervention for the detachment.