# P.E.R.F.E.C.T. pterygium surgery in Glasgow? Real-world outcomes and follow up issues in the NHS

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## Introduction

Pterygium is a fibrovascular degenerative growth extending onto the cornea. Well-documented risk factors include ultraviolet light exposure[1] and increasing age [2,3]. Ocular irritation, poor cosmesis and progression into the visual axis may prompt intervention[4]. Numerous surgical techniques have been reported with varying levels of recurrence[5]. The 'P.E.R.F.E.C.T. for PTERYGIUM' [4] technique, first reported in 2008, has a stated 0.05% recurrence rate[6] and involves extensive Tenon's dissection with a large conjunctival autograft[4]. Post-operatively, the PERFECT technique is reported to be cosmetically favorable for patients[7]. Studies replicating the PERFECT technique are few[8].

## Objectives

1. To find out the rate of recurrence following primary pterygium removal using the 'PERFECT for PTERYGIUM'[4] surgical principles in an NHS setting.

## Methods

A retrospective study of all patients who underwent pterygium surgery by a single surgeon in NHS Greater Glasgow and Clyde, Scotland utilizing the principles of the 'P.E.R.F.E.C.T. for PTERYGIUM' technique between 2015 and 2020 was performed. Patient demographic data collected included age, gender and postcode. Excised tissue were analysed by pathology for definitive diagnosis and this analysis was recorded. Follow-up clinic appointments were planned at 2 weeks, 4 months and 1 year post-surgery. Absence of recurrence, or discharge with no documented recurrence at 300 days was the primary end point.

## Results

47 patients were identified (28 male, 19 female); average age of 55 years. The mean conjunctival autograft size was 53mm2 (median 50mm2; upper 160mm2). In 38 cases (81%) pathology was consistent with pterygium (5 (10.6%) pseudo-pterygium). 2 cases had evidence of dysplasia (4.3%). 45 patients attended any post-operative follow up, with 23 (49%) attending review >300 days post-operatively. 14 patients (29.8%) were lost or Did Not Attend (DNA) scheduled NHS review. Median overall Scottish Index of Multiple Deprivation (SIMD) score was 4 (1 most deprived; 10 least deprived), but for the DNA group was 1 (more deprived).
One patient (2.2%) had minor recurrence onto the cornea, but this didn't require intervention. No patients were re-referred with pterygium recurrence.

## Conclusions

1. Utilisation of the 'P.E.R.F.E.C.T. for PTERYGIUM' surgical principles in an NHS setting had a low recurrence rate of 2.2% in this study.
2. No patients had significant complications.
3. In this NHS cohort patients undergoing pterygium surgery on average lived in more deprived areas than the Scottish median.
4. Greater socio-economic deprivation is associated with reduced post-operative follow –up attendance.

## Key Points

- **The 'P.E.R.F.E.C.T. for PTERYGIUM' surgical principles produce very low post-operative recurrence rates**
- **No patients encountered complications secondary to the 'PERFECT for pterygium' surgical principles**
- **Patients living in more deprived areas are less likely to attend follow-up clinics**

## References


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