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Recurrent pterygium in Bintulu, Sarawak (Malaysian Borneo): determining its risk factors

Loshni **Murugia**[1], **Chong** Ka Lung[1], **Lim** Lik Thai[2,3], Rohanah **Alias**[4]

[1]Ophthalmology Department, Hospital Bintulu, Sarawak, Malaysia; [2]Universiti Malaysia Sarawak (UNIMAS), Sarawak, Malaysia; [3]Sarawak General Hospital, Sarawak, Malaysia; [4]Ophthalmology Department, Hospital Kuala Lumpur, Kuala Lumpur, Malaysia

Abstract

Introduction: Pterygium may give rise to astigmatism in addition to causing blindness in advanced stages, reflecting the importance of timely surgical intervention. Despite various operative approaches, the recurrence rate continues to range from 2% to 89%. Therefore, it is essential to investigate the risk factors influencing recurrence to improve therapeutic strategies.
Purpose: To determine the risk factors of pterygium recurrence among the multiethnic cohort of patients of Bintulu, Sarawak (Malaysian Borneo).
Study design: Retrospective cohort.
Materials and methods: This study was conducted in Bintulu Hospital, Sarawak (Malaysian Borneo) and involved patients who underwent pterygium excision with conjunctival autografting between April 1, 2016 and May 31, 2019. Patients completed at least a year of follow-up for recurrence detection. Collected data included presence of recurrence, sociodemographics, outdoor activities, habits, first-degree family history, pterygium type and location, as well as laterality. Chi-squared test, Fisher's exact test, and logistic regression analysis were used.
Results: A total of 161 eyes that underwent pterygium excision in 137 patients were identified. Percentage of recurrence was found to be 42%. The mean age during excision was 59.3 ± 11.5 years; age group showed no significance in pterygium recurrence (p = 0.447). Male gender showed statistical significance (p = 0.045, OR 1.90, CI 1.01, 3.58) in chi-squared test but not in logistic regression. Ethnicity,

Correspondence: Dr.Loshni Murugia, MD, Ophthalmology Department, Hospital Bintulu, Jalan Bukit Nyabau, 97000, Bintulu, Sarawak, Malaysia.
E-mail:loshni66@gmail.com

marital status, income, and education level showed no association with recurrence ($p > 0.05$). Anatomic factors like location ($p = 0.353$) and laterality ($p = 0.955$) also showed no association. Smoking ($p = 0.867$) and alcohol intake ($p = 0.397$) were insignificant, similar to first-degree family history ($p = 0.137$). Activities involving sun exposure ($p < 0.001$, OR 18.34, 95% CI 5.59, 60.17) and recurrent pterygium type ($p = 0.001$, OR 7.40, 95% CI 1.81, 30.21) supported a positive association with recurrence. Medication adherence ($p < 0.001$, OR 3.61, 95% CI 1.07, 12.21) and the use of sun protection ($p < 0.001$, OR 7.90, 95% CI 3.25, 19.19) showed a statistically significant decrease in recurrence.
Conclusion: Activities involving sun exposure, use of sun protection, medication adherence, and recurrent pterygium type have shown to be statistically significant in influencing recurrence after excision and conjunctival autograft.

Keywords: conjunctival grafting, pterygium, pterygium excision, recurrence, risk factors

Pterigium berulang di Bintulu, Sarawak (Borneo Malaysia): penentuan faktor risiko

Abstrak

Pendahuluan: Pterigium dapat menimbulkan astigmatisme selain menyebabkan kebutaan pada tahap lanjut, yang menggambarkan pentingnya campur tangan pembedahan tepat pada masanya. Walaupun terdapat pelbagai pendekatan pembedahan, kadar pengulangan terus berkitar antara 2% hingga 89%. Oleh itu, adalah mustahak untuk menyelidik faktor risiko yang mempengaruhi kes berulang dan memperbaiki strategi terapi.
Tujuan: Untuk menentukan faktor risiko berulang pterigium di antara kohort pesakit pelbagai etnik Bintulu, Sarawak (Borneo Malaysia).
Reka bentuk kajian: Kumpulan retrospektif.
Bahan dan kaedah: Kajian ini dilakukan di Hospital Bintulu, Sarawak (Borneo Malaysia) dan melibatkan pesakit yang menjalani eksisi pterigium dengan cantuman autograf konjunktiva antara 1 April 2016 dan 31 Mei 2019. Pesakit menyelesaikan sekurang-kurangnya satu tahun susulan lanjut untuk pengesanan kes berulang. Data yang dikumpulkan termasuk kehadiran berulang, sosiodemografi, aktiviti luar, kebiasaan, sejarah keluarga darjah pertama, lokasi dan jenis serta kelateralan pterigium. Uji Chi-kuadrat, uji tepat Fisher, dan analisis regresi logistik digunakan.
Dapatan: Sebanyak 161 mata yang menjalani eksisi pterigium pada 137 pesakit dikenal pasti. Peratusan berulang didapati 42%. Umur min semasa eksisi adalah 59.3