

# 配戴單眼角膜塑型片對於視差變化的研究

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此篇我們發表於2019年 Journal of Formosa Medical Association，是研究單眼近視的學童，配戴單眼角膜塑型片對於視差變化的研究。以前的研究發現，視差的學童(兩眼相差-1.0 D 以上，也就是一般說的100度)，長期觀察下來，近視較深的那一眼度數增加較快，若不加以控制，容易變成高度近視。我們研究了31位學童配戴單眼塑型片的近視控制效果及視差的變化，平均年齡12歲，平均追蹤時間大約2年，平均視差度數大約 -2.73 D (273度)，另一眼不戴眼鏡也不點藥水。經過2年的追蹤觀察後，發現單眼配戴塑型片的學童在近視度數上的變化明顯地比對側眼少，兩眼眼軸差距(也就是視差的程度)有明顯減少( $P < 0.005$ )；而這些配戴塑型片學童在規律的返診檢查中，並沒有明顯的併發症。這顯示視差學童配戴單眼塑型片能夠減少兩眼近視度數的差距。



Original Article

## Assessing the change of anisometropia in unilateral myopic children receiving monocular orthokeratology treatment

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### KEYWORDS

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Unilateral myopia

**Abstract** Background: This study aimed at comparing the inter-eye axial elongation difference in order to evaluate the change of anisometropia in unilateral myopic children wearing monocular orthokeratology (Ortho-K) lens.

**Methods:** In this retrospective cohort study, we recruited monocular myopic subjects treated with monocular Ortho-K lens from May 2012 to January 2017. The axial length (AL) of both eyes was recorded, and we calculated the AL difference as our primary outcome, to evaluate myopia progression. High anisometropia was defined as anisometropia more than 2.500. The generalized estimating equations (GEE) model was used to assess the related risk factors.

**Results:** A total number of 31 unilateral myopic patients were identified. The initial wearing age of the subjects was  $12.32 \pm 3.07$  years. In myopic eyes, the initial spherical equivalent was  $-2.73 \pm 0.95$  diopter (D). The mean follow-up duration was  $2.01 \pm 1.48$  years. A significant reduction in the AL difference was found, from  $0.83 \pm 0.45$  millimeters at the baseline to  $0.59 \pm 0.49$  millimeters at 24 months ( $P = 0.039$ ). Besides, after wearing Ortho-K lens for a long term, high anisometric wearers showed more AL difference reduction than low anisometric wearers in unilateral myopic children ( $P = 0.002$ ).

**Conclusions:** This study demonstrated that the myopic eyes in unilateral myopic children had less AL growth than the companion emmetropic eyes when treated with monocular Ortho-K lenses. Wearing Ortho-K lens for a long time would present a more significant AL difference reduction in high anisometric children.

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