

Perbandingan ketebalan kornea dan morfologi sel endotel penderita miopia sedang pada pemakaian harian lensa kontak lunak hidrogel konvensional (nelfilcon a) terhadap silikon hidrogel (lotrafilcon b): penelitian pendahuluan = Comparison of corneal thickness and endothelial cell morphology in myopic patients with daily wear hydrogel (nelfilcon a) and silicon hydrogel (lotrafilcon b): contact lenses a pilot study

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Abstrak

[ABSTRAK

Tujuan: Untuk mengevaluasi perbandingan ketebalan kornea dan morfologi sel endotel penderita miopia sedang dengan pemakaian harian lensa kontak lunak hidrogel konvensional (nelfilcon A) terhadap silikon hidrogel (lotrafilcon B) selama 1 bulan.

Metode: Penelitian ini merupakan uji klinis tersamar tunggal pada 17 pasien (34 mata) dengan miopia sedang yang dibagi secara acak untuk memakai lensa kontak lunak nelfilcon A atau Lotrafilcon B.

Ketebalan kornea sentral (CCT), Coefficient of variation (CV), dan persentase sel heksagonal (6A) diukur menggunakan mikroskop spekuler non-con robo Konan sebelum penelitian (pre-fitting), 1 minggu serta 1 bulan setelah pemakaian lensa kontak lunak. Pasien juga dievaluasi mengenai adanya efek samping subyektif dan komplikasi selama memakai lensa kontak.

Hasil: Terdapat 64,7% subyek dengan riwayat pemakaian lensa kontak lunak sebelumnya, dimana 52,9% diantaranya adalah pemakai hidrogel konvensional yang tidak teratur. Setelah evaluasi 1 bulan, tidak didapatkan perbedaan yang bermakna antara pemakai Nelfilcon A dengan Lotrafilcon B dalam hal: ketebalan kornea sentral ($p=0,285$; uji Mann Whitney), CV ($p=0,587$; uji t tidak berpasangan), dan 6A ($p=0,353$; uji t tidak berpasangan). Analisis general linear model terhadap waktu pengukuran mendapatkan perbedaan yang bermakna pada seluruh subyek meliputi penurunan CCT ($p=0,001$) dan CV ($p=0,001$), serta peningkatan 6A ($p=0,022$) pada test within subject effect.

Simpulan: Tidak terdapat perbedaan CCT, CV, dan 6A yang bermakna secara statistik antara pada pemakaian harian lensa kontak lunak Lotrafilcon B dan Nelfilcon A. Pasien dengan riwayat penggunaan lensa kontak sebelumnya mendapatkan manfaat dengan pemakaian nelfilcon A dan lotrafilcon B dalam hal perbaikan hipoksia jaringan berupa: penurunan ketebalan kornea dan perbaikan morfologi sel endotel.

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ABSTRACT

Objective: To compare corneal thickness and endothelial cell morphology in myopic patients wearing 1 month hydrogel conventional and silicon hydrogel contact lenses in daily wear.

Methods: This is a prospective, single blind, randomized study. Seventeen (34 eyes) myopic patients were randomly assigned to wearing either nelfilcon A or lotrafilcon B. Central corneal thickness (CCT), Coefficient of variation (CV), and percentage of six-sided cell (6A) were examined using specular microscope non-con robo Konan. Changes in CCT, CV, and 6A were evaluated before contact lenses fitting as well as 1 week and 1 month after the treatment. Patients were also evaluated for any subjective side

effects and complications during the treatment period.

Results: There were 64,7% subjects with history of contact lens wearers and 52,9% of them was hydrogel wearers. After 1 month daily wear of nelfilcon A and lotrafilcon B, no statistically differences changes in CCT ($p=0,285$; Mann Whitney test), CV ($p=0,587$; unpaired t test) dan 6A ($p=0,353$; unpaired t test).

General linear model analysis in follow up evaluation with test of within subject effect revealed decreased CCT($p=0,001$) and CV ($p=0,001$), also increased 6A ($p=0,022$) in all subjects.

Conclusions: There were no statistically difference CCT, CV, and 6A between daily wear of nelfilcon A and lotrafilcon B. Subjects with history of contact lens wearers gained advantages in oxygen availability, which is decrease in corneal thickness and improvement of endothelial cell morphology., Objective: To compare corneal thickness and endothelial cell morphology in myopic patients wearing 1 month hydrogel conventional and silicon hydrogel contact lenses in daily wear.

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