

# Perbandingan Keamanan Injeksi Intrakamera Moxifloxacin dengan Levofloxacin tanpa Dilusi pada Operasi Katarak = Safety Profile Comparison of Undiluted Intracameral Moxifloxacin vs. Levofloxacin in Cataract Surgery

Arcci Pradessatama, author

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## Abstrak

Latar Belakang: Meningkatnya resistensi bakteri okular terhadap levofloxacin mendorong perlunya disiapkan agen alternatif untuk antibiotik intrakamera. Moxifloxacin, golongan florokuinolon generasi baru, memiliki potensi. Metode: Desain penelitian berupa randomized controlled trial (RCT) dengan lengan perlakuan: 0.1 cc moxifloxacin 0.5% dan 0.1 cc levofloxacin 0.5% intrakamera tanpa dilusi pada akhir operasi katarak. Luaran utama penelitian: endothelial cell density (ECD), central corneal thickness (CCT), central macular thickness (CMT), tekanan intraokular (TIO), tingkat peradangan segmen anterior, serta kejadian tidak diinginkan. Hasil: Dari 68 subjek penelitian, tidak didapatkan perbedaan signifikan pada parameter dasar. Pada pengukuran satu hari pascaoperasi, didapatkan TIO yang signifikan lebih tinggi pada lengan moxifloxacin ( $p=0.004$ ; mean diff=4.9; IK95%=1.7 – 8.2). Tidak didapatkan perbedaan yang signifikan pada luaran utama lain pada hari pertama pascaoperasi. Hasil pengukuran satu minggu dan satu bulan tidak didapatkan perbedaan parameter yang signifikan antara kedua kelompok perlakuan. Kesimpulan: Pada penelitian ini, didapatkan penggunaan 0.1 cc moxifloxacin intrakamera 0.5% menunjukkan profil keamanan yang mayoritas sebanding dengan levofloxacin. Namun, didapatkan parameter tekanan intraokular hari pertama pascaoperasi yang lebih tinggi secara signifikan pada kelompok yang menerima moxifloxacin. Kata Kunci: antibiotik intrakamera; central corneal thickness; central macular thickness; endothelial cell density; levofloxacin; moxifloxacin; operasi katarak; tekanan intraokular.

.....The escalating resistance of ocular bacteria to levofloxacin has necessitated the exploration of alternative intracameral antibiotics. Moxifloxacin, a newer generation fluoroquinolone, has shown promise in this regard. This study utilized a randomized controlled trial (RCT) design with two treatment arms: 0.1 cc moxifloxacin 0.5% and 0.1 cc levofloxacin 0.5%, both administered intracamerally without dilution at the end of cataract surgery. Among the 68 subjects included in the study, no significant differences were observed in the baseline parameters. However, on the first postoperative day, there was a significantly higher IOP in the moxifloxacin group compared to the levofloxacin group ( $p=0.004$ ; mean difference=4.9; 95% confidence interval=1.7 – 8.2). No other significant differences were found in the primary outcomes on the first postoperative day. At one week and one month post-surgery, there were no significant differences in the measured parameters between the two treatment groups. This study revealed that the use of 0.1 cc moxifloxacin 0.5% as an intracameral antibiotic demonstrated a safety profile largely comparable to levofloxacin. However, it was associated with a significantly higher intraocular pressure on the first postoperative day compared to levofloxacin.