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HEALTHCARE RESOURCE UTILIZATION AND COSTS OF INTRAVITREAL RANIBIZUMAB OR AFLIBERCEPT VS. DEXAMETHASONE FOR DIABETIC MACULAR EDEMA IN TAIWAN

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Background

Both intravitreal dexamethasone implant (DEX-implant) and anti-vascular endothelial growth factor (anti-VEGF) drugs have shown optimal efficacy and safety in diabetic macular edema (DME), but the compaisions of healthcare utilization and medical costs among these drugs remain limited.

Methods

This retrospective cohort study from Chang Gung Memorial Hospitals included patients with DME newly receiving intravitreal anti-VEGF drugs, including ranibizumab and ablifercept, and DEX-implant from 2017 to 2021.

The primary outcome was the 1-year DME-related healthcare utilizations and direct medical cost per patient with DME that was reimbursed by the Taiwan's National Health Insurance.

Results

We included a total of 3,510 patients with DME newly receiving intravitreal anti-VEGF drugs (n=3402) and DEX-implant (n=108).

We found the average outpatient medical cost per person for eye cares was lower for the DEX-implant group (NTD 81494.6 vs. 98979.0; p=0.002), compared to anti-VEGF group during the follow-up period.

The average intravitreal injections per person for eye cares was lower for the DEX-implant group (1.8 vs. 3.5; p<0.001), compared to anti-VEGF group during the follow-up period. However, patients with DEX-implant received more penuma tonometry (2.5 vs. 1.9; p=0.038) and fundus examination (3.3 vs. 1.8; p<0.001), compared to anti-VEGF group during the follow-up periods.

Conclusion

In this largest multi-institutional study in Taiwan, we found the lower average direct outpatient medical cost per person for eye cares and number of intravitreal injections were lower for the DEX-implant group, compared to anti-VEGF group during the follow-up period.