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Cost-saving Effect of the Use of Generic Latanoprost in the Treatment of Glaucoma

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Introduction

Glaucoma is a prevalent eye disease, affecting an estimated 60.5 million people worldwide in 2010.. Its treatment depends mainly on regular topical medications to lower the intraocular pressure(IOP), which is the least invasive method compared to laser and surgery. Latanoprost is one of the most effective classes of medication. Despite its convenient daily dosing, often its prescription was deferred due to cost concern (109.3 HKD for each unit of patented latanoprost compared to 5 HKD for each unit of timolol, another first-line medication). The cost of eye medication, however, also depends on the number of bottles dispensed per period, which in turn is determined by bottle design and volume. Since the introduction of generic latanoprost in September 2015 by the pharmacy unit of Hong Kong Eye Hospital(HKEH), it has gradually replaced the existing patented latanoprost. We aim to calculate the cost-saving effect of this activity.

Objectives

To identify the cost-saving effect of switching from patented latanoprost eye drops to generic latanoprost eye drops

Methodology

We extracted a list of patients who were dispensed with patented latanoprost eye drops at HKEH pharmacy within both of the 3-month periods of 15/5-14/8/15 and 15/9-14/12/15. Cost involved in prescription of latanoprost in both periods was compared with paired t-test.

Result

A total of 409 patients were prescribed latanoprost in both periods. A total of 1846 bottles of patented latanoprost were prescribed in the period of 15/5-14/8/15, while 1813 bottles of generic latanoprost were prescribed in the subsequent 3-month period. The mean unit price of patented and generic latanoprost per bottle were 109.3 HKD

and 65.3HKD respectively; whilst the duration of medication prescribed were 119.5 days and 122.6 days respectively. The cost of latanoprost per eye per week dropped significantly from \$19.6 to \$11.6 ($p < 0.01$, Student's t-test). This meant a saving of \$8 per eye per week for any latanoprost prescription, and the mean percentage change in cost was -40.2%. The projected annual saving due to the change of generic latanoprost would amount to 170,144 HKD. This report demonstrated that generic latanoprost led to a significant reduction in drug expense. Further study is required to compare the efficacy of generic and patented latanoprost.