The Efficacy of Intracameral Vigamox (Moxi Floxacine Eye Drop) Injection Combined with Garamycine Subconjunctival Injection in Comparison to Garamycine Subconjunctival Injection Only in The Prevention of Post Cataract Surgery Endophthalmitis.

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Abstract
Aim: to compare the efficacy of the combination of intracameral vigamox with subconjunctival Garamycine compared with the injection of garamycine only in the prevention of post operative endophthalmitis.

Methods: The study was done in Al-Hayat private hospital in Al-Hilla city, Babylon, Iraq. The study started in 2012. 500 patients participate in the study 250 given both intracameral vigamox and garamycine subconjunctival injection , the others were given garamycine subconjunctival injection only, and followed up for about 1 year.

Results: From group (A) group that was given both intracameral vigamox and garamycine subconjunctival injection only 1 patient developed stich abscess and anteripor chamber reaction following 2 months from group (B) that receive only garamycine subconjunctival injection. 5 patients developed endophthalmitis.

Conclusion: Intracameral vigamox is a very effective if added to garamycine subconjunctival injection in the reduction of post operative endophthalmitis.

Keywords: vigamox, endophthalmitis, post operative.

Introduction
As we know the reported cases of endophthalmitis now always are rare compared with the reported cases 20 years ago but it is still the main concern of ophthalmologist specially cataract surgeons because of its devastating effects on the result of surgery.(Lane et al., 2008; Matsuura et al., 2012; Matsuura et al., 2013).

As we know the introduction of the 10% povidone (Iodine) was revolutionary in cataract surgery in decreasing the rate of postoperative endophthalmitis world wide, along with the preoperative administration of topical antibiotics(O’Brien et al.,200; Matsuura et al., 2013; Chang et al., 2007), and the subconjunctival injection of Antibiotics mainly the garamycine ampoule(Cuilla et al., 2001; Kim et al., 2008).
After a while and in the last decade another thing came into the surface which is the intracameral injection of antibiotic after finishing the surgery such as intracameral cefuroxine which has been generally administrated and accepted particularly in Europe (Friling et al., 2013; Arbisser, 2008; Asena et al., 2013).

The number of reports regarding intracameral injection of moxifloxacine has increased because there is commercial preparation of this antibiotic as eye drop intraduced by (Alcon company) which is preservative free so it can be given whether diluted or not safely intracamerally (ESCRS, 2007; Espiritu et al., 2007; Shorstein et al., 2013; Oshika et al., 2007), and patient shows very high intraocular concentration and it is concentration dependant compared to cefuroxime which is time dependant (Miller et al., 2006; Shorsrein et al., 2013; Montan et al., 2002), that mean that moxifloxacine is more rapid in action (Arshinoff & Bastianelli, 2011; Kernt et al., 2009).

**Material and methods**

The study has taken place in AL-Hayat privet hospital in Al Hilla city – Babylon- Iraq. 500 patients participate in this study as following:

**Group A:-**

**Preoperative preparation:-**

The patient takes eye drop vigamox (moxifloxacine) 3 days preoperatively 1X6. And before surgery he washes his face 6 times and is given topical povidone and the surgery is done and after finishing surgery he is given vigamox (moxifloxacine) 0.2ml intracamecally not diluted and subconjunctival garamycine injection 0.6ml.

**Group B:**

Not given preoperative vigamox.

Not given intracameral vigamox.

Given only subconjunctival garamycine.

We follow up the patient:

First visit the 1st day post operation. The second visit after 1 week.

Then weekly for about 40 days, then after 6 months and then after 1 year.

**Figure (1)**

<table>
<thead>
<tr>
<th>patient receive vigamox and subconj.garamycine Group (A)</th>
<th>number of pt that develop endophthalmitis</th>
</tr>
</thead>
<tbody>
<tr>
<td>250</td>
<td>1</td>
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**Figure (2)**

<table>
<thead>
<tr>
<th>patient receive subconj.garamycine Group (B)</th>
<th>number of pt that develop endophthalmitis</th>
</tr>
</thead>
<tbody>
<tr>
<td>250</td>
<td>5</td>
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</table>
Results
From group (A) only 1 patient developed stich abscess following 2 months with anterior chamber reaction. From group (B) five patients develop postoperative endophthalmitis.

Discussion
From the result it is obvious that the use of intracameral vigamox reduce the rate of endophthalmitis by about 4 folds.

From our follow up we see no side effect of intracameral vigamox regarding the cornea of anterior chamber reaction or any discomfort to the patient and there is no effect on the intra-ocular lens.

In group (A) only 1 patient developed stich abscess with anterior chamber reaction and responded very well to vigamox eye drop hourly and fucidine eye ointment.

This study really shows the great effectiveness of intracameral vigamox injection reducing the rate of post operative endophthalmitis.

Conclusion
intracameral vigamox injection is highly effective in reducing the rate of postoperative endophthalmitis, and safe to the eye.

References
Espiritu CRG, Caparas VL, Bolinao JG. Safety of prophylactic intracameral moxifloxacin 0.5% ophthalmic solution in cataract surgery patients. J Cataract Refract Surg 2007; 33:63–68


