Chronic post trabeculectomy hypotony occurs in 1.3% to 7% of eyes following MMC trabeculectomy, and associated with many structural and functional changes(1). This complication is as dangerous as the glaucoma for which surgery was performed. Elevating the IOP only usually not solve the problem as this ignores an important pathogenic factor which is the sudden decompression during trabeculectomy in eyes with elastic sclera leading to the choroidal and even scleral folds commonly seen in these eyes (2).

The aim of this prospective intervention- al study is trying to get better results in treating this complication by reversing the two pathogenic factors with minimal invasive surgery possible. This is by combin- ing autologous intrableb blood injection to limit filtration with MMC trabeculectomy and associ- ated topical and periocular 5-fluorouracil. This technique is simple compared to reports of aggressive vitreoretinal surgery with internal limiting membrane peeling and perfluorocarbon liquids injection (4,5).

Materials & Methods

Eight eyes with chronic post trabecu- lectomy hypotony with hypotony maculopathy were enrolled in this work. Mannitol 20 % was infused preoperatively for further dehydration of the vitreous. Under combined topical and peribulbar anesthesia with completely sterile field, 0.6 ml of pure SF6 was injected intravitreal ly. Injection of 1 ml of autologous blood obtained from the antecubital vein of the patient inside the bleb was done at the end. Face down positioning to keep the patient inside the bleb was done at the end. Face down positioning to keep the patient inside the bleb was done at the end.

Apart from the failure of improvement in one eye (12.5%), there was no complication related to the procedure. However the patients were annoyed by the bad cosmetic appearance due to blood filling the subconjunctival space which took about 2-3 weeks to disappear.

Discussion

Sudden intraoperative decompression within elastic sclera is an important factor for the development of hypotony maculopathy as evidenced by the presence of this complication in young myopic male eyes (3). Also, elevating the IOP alone is not sufficient to restore vision in some cases (4). In this study we also noticed that this complication occurs mostly in patients (7 out of 8) who have some degree of blepharochalasis and narrow palpebral fissure both working as a tight speculum and increasing pressure on the globe and intensifying the effect of sudden decompression during trabeculectomy.

The success rate in our study is 87.5 %. Improvement included both functional and anatomical improvement. Vision improved in all the eyes successfully treated. Previous reports indicated that vision can improve even after seven years of prolonged hypotony (5,6). We did not encounter any serious complication in our study. Other studies reported hyphema and blood staining after autologous blood injection (7).

References


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Fig 1 showing the fundus picture of post trabeculectomy hypotony with maculopathy

Table 1: showing the demographic data:

<table>
<thead>
<tr>
<th>Mean age (years)</th>
<th>31.8 (20 – 61)</th>
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<tbody>
<tr>
<td>Sex (males: females)</td>
<td>7:1</td>
</tr>
<tr>
<td>Error (myopia ≤5d, Hyperopia)</td>
<td>7:1</td>
</tr>
<tr>
<td>Mean Preop. IOP (mmHg)</td>
<td>2.21±0.5</td>
</tr>
<tr>
<td>Mean Preop. VA</td>
<td>0.3 (0.05 – 0.2)</td>
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</tbody>
</table>

Fig 2 showing the simple technique implemented

Fig 3 showing pre and post operative fundus appearance

Fig 4 showing the postoperative appearance in one of the cases.