Safety of warfarin therapy during cataract surgery under topical anesthesia

Segurança da terapia com varfarina durante cirurgia de catarata com anestesia tópica

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ABSTRACT

Purpose: To analyze the safety of warfarin therapy during cataract surgery under topical anesthesia.

Methods: This was a prospective nonrandomized comparative study of 60 eyes of 60 patients treated with or without concurrent oral warfarin anticoagulant therapy, referred for cataract surgery under topical anesthesia. The sample included a treatment (n=30) and a control (n=30) group.

Results: There were no records of intraoperative or postoperative intracameral bleeding complications in both the groups. At 1-month postoperative follow-up, 90.0% of patients presented spectacle-corrected visual acuity of at least 20/40.

Conclusion: Cataract surgery by phacoemulsification with topical anesthesia can be successfully conducted without discontinuing warfarin.

Keywords: Cataract extraction; Anticoagulants; Warfarin/adverse effects; Hemorrhage

INTRODUCTION

Most patients undergoing cataract surgery are elderly and are on regular systemic medications. Important classes of drugs include antplatelet and anticoagulant medications, which may increase the risk of hemorrhagic anesthetic, or operative complications. These medications are taken to reduce the incidence of potentially life-threatening thromboembolic events in patients with cardiovascular conditions.

The Royal College of Ophthalmologists Cataract Surgery Guidelines recommends that patients taking warfarin should continue it before cataract surgery but that the international normalized ratio (INR) should be maintained within the therapeutic level. Some studies have demonstrated that uncomplicated cataract surgery can be safely performed during oral anticoagulant therapy.

This prospective study aimed to analyze the safety of warfarin therapy during cataract surgery under topical anesthesia.

METHODS

A prospective comparative study was conducted with 60 consecutive eyes of 60 patients treated at the Hospital das Clínicas da Faculdade de Medicina da Universidade de São Paulo for cataract surgery. The sample included 30 consecutive patients on oral anticoagulant therapy with warfarin and 30 controls who were not on anticoagulant therapy. The exclusion criterion was any ocular disease other than cataract.

The variables analyzed were international normalized ratio (INR) of the warfarin group, dosage of warfarin, postoperative visual acuity, and intraoperative and postoperative complications.

All patients underwent complete ophthalmic examination prior to cataract extraction by phacoemulsification with clear corneal incision and intraocular lens implantation, under topical anesthesia. No patient required intraoperative mechanical pupil dilation or corneal suture.

In the warfarin group, INR was determined 1 week prior to and on the day of surgery; INR between 1.9 and 2.7 was a prerequisite for undergoing cataract extraction according to our surgical protocol.

Data were analyzed by descriptive statistical methods, and categorical variables are expressed as absolute frequencies.

RESULTS

Among the 30 patients undergoing anticoagulant therapy with warfarin, 23 were taking a 5.0-mg dose per day and seven were taking 2.5 mg per day. The mean INR value was 2.04.

No intracameral perioperative bleeding or postoperative hemorrhagic complications were observed in the treatment or control group. With regard to the postoperative visual outcome, 90% of the patients had a visual acuity of 20/40 or better at 1-month follow-up.

DISCUSSION

Prophylactic anticoagulation has been of paramount importance in preventing coronary ischemic events, stroke, and peripheral arte-
rial obstruction. However, it is well known that patients on anticoagulation therapy are exposed to a greater risk of hemorrhage when undergoing surgical treatment[6].

This increased risk makes these patients represent a challenge to cataract surgeons. Continuing antiplatelet and anticoagulation therapies may place these patients at risk of bleeding complications, whereas discontinuing these medications puts them at risk of thromboembolic complications[7-9].

Annually, 10% of patients receiving oral anticoagulants require treatment interruption for surgery or an invasive procedure[10]. A multicenter audit has shown that 5.1% of 48,862 patients subjected to cataract surgery were on concurrent warfarin therapy[1]. Considering the long and variable half-life of vitamin K antagonists, some guidelines recommend that patients should discontinue warfarin at least 5 days before major procedures[10-12].

The incidences of subconjunctival hemorrhage and microscopic hyphema were significantly higher in patients undergoing phacoemulsification without warfarin interruption compared with the discontinuation subgroup, although most of such bleeds were self-limiting and did not significantly decrease visual acuity[13-15]. Most members of the Canadian Society of Cataract and Refractive Surgery do not recommend suspending warfarin prior to cataract surgery[14]. However, it has been presented that most glaucoma surgeons discontinue the use of anticoagulants (warfarin or aspirin) before anti-glaucoma surgery[15].

The results of the present study are in agreement with reports in the literature that state that there is no significant increase in bleeding that could potentially affect vision in patients undergoing cataract surgery while using antiplatelet or anticoagulant therapy[11,14,15], particularly when the surgery is conducted under topical anesthesia[20,21]. Thus, in this series, phacoemulsification cataract surgery under topical anesthesia was safely performed without discontinuing warfarin anticoagulation in uncomplicated eyes. However, larger studies are required to elucidate this issue.

REFERENCES

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