Bleeding Complications in Both Anti-coagulated and Non-anti-coagulated Surgical Patients.

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**Introduction:** As the population ages, there is an increased frequency of patients using anticoagulant medications. As bleeding following oculoplastic surgery can have devastating effects, many practitioners operate only after discontinuing anticoagulants. While this may decrease the risk of bleeding complications, it potentially increases the risk of neurologic and cardiovascular events in susceptible patients. This study was performed to ascertain the incidence of anticoagulant use in oculoplastic surgical patients and determine any difference in intra-operative and post-operative bleeding complications among patients who continued anticoagulants, those who stopped the medications, and those not anticoagulated. The rates of medication disclosures were also investigated.

**Methods:** Following institutional IRB approval, a retrospective chart review was conducted (January 1, 2008 to June 30, 2010). Anticoagulants included: aggrenox, aspirin, coumadin, fish oil, NSAIDs, plavix, vitamin E. Intra-operative bleeding complications were defined as when additional action was required from the norm. Post-operative hemorrhagic complications were present when surgical intervention or emergent office visits were needed, or those patients with a prolonged recovery or altered outcome. To determine medication disclosure, self-reporting patient histories were reviewed.

**Results:** 1038 surgeries in 941 patients were reviewed. There were no intra-operative complications among the 605 patients not using anticoagulants. A single post-operative orbital hematoma developed following lymphangioma debulking. 433 patients were taking anticoagulants at the time of surgical planning. 202 were requested to withhold these medications. (118/202: non-diabetics without previous neurologic or cardiovascular events, 59/202: previous neurologic/cardiovascular events, 37/202: diabetic using prophylactic aspirin, 20/202 using coumadin [Mean INR of 13/20 patients: 1.38, range 1.06-1.85]). There were 3 of 202 (1.48%) intra-operative complications, including excessive bleeding during a DCR, frequent cautery during orbital AVM excision, and bleeding during cicatricial ectropion repair. Two episodes of post-operative bleeding occurred (0.99%) one hematoma after lower blepharoplasty requiring surgical drainage, and an emergency visit for bleeding following socket reconstruction. Patients continuing anticoagulation (n=137, 123 on anti-platelet medications, 14 on coumadin [Mean INR 1.93, range 0.99-2.64]), did not experience intra-operative bleeding complications. One episode of post-operative bleeding occurred (0.73%) following cicatricial ectropion repair, requiring exploration. None of the study patients sustained a permanent visual deficit or deformity related to hemorrhage. 718/941 patients disclosed all of their current medications, while 158/941 did not, 68/941 could not be evaluated as the patient did not fill out the history form. Of the patient's not disclosing medications, 97/158 (61%) did not report aspirin use (10% of study patients).

**Conclusions:** A large percentage (42%) of patients undergoing oculoplastic procedures are using anticoagulants. The decision to operate and whether to discontinue these medications must be individualized considering the nature of the procedure and the patient's medical condition. In this study, the rates of bleeding complications did not appear to differ between patients who continued their anticoagulation and those who did not. In certain patients who are at increased risk for a vascular event, it may be appropriate to continue anticoagulants, ensuring adequate hemostasis throughout the surgical case.

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