

Antidepressants May Make for Depressing Surgery

To the Editor:

Selective serotonin reuptake inhibitors (SSRIs) and serotonin–norepinephrine reuptake inhibitors are today among the most commonly prescribed medications in the general population. They are currently used to treat depression, anxiety, obsessive compulsive disorder, chronic pain, and many other psychiatric diseases. Prescriptions for antidepressants have increased markedly, and surveys estimate that over 10% of the U.S. population takes some form of antidepressant. In women between the ages of 40 and 59 years, that number is 22.8%.¹ A majority of these patients are on an SSRI/serotonin–norepinephrine reuptake inhibitor due to the favorable side-effect profile compared with older generation antidepressants.

While they are helpful in treating depression, SSRI/serotonin–norepinephrine reuptake inhibitors and tricyclic antidepressants have untoward effects on platelet aggregation. During the coagulation cascade, platelets release serotonin to enhance aggregation. When serotonin receptors are blocked by antidepressants with long-term usage (6–12 weeks), the platelets are unable to effectively store serotonin, leading to decreased platelet aggregation. Serotonin release also aids the procoagulation cascade downstream of platelets, and patients on chronic antidepressants may have this pathway interrupted, leading to prolonged intraoperative oozing.^{2,3}

The authors have had several patients over the years who have had prolonged bleeding intraoperatively without any obvious explanation. These patients have normal blood pressure, pulse rates, oxygen saturation and did not report taking any of the typical blood thinning medications or supplements. Two recent patients with excessive bleeding at orbital and eyelid surgery assured the authors that the only medication they took was antidepressants. The first was on sertraline (SSRI) 100mg daily for 3 years, and the second was on duloxetine (serotonin–norepinephrine reuptake inhibitor) 30mg daily for 5 years. In these 2 patients, the authors attributed the patients' bleeding to these medications. This led the authors to consider how many frustrating cases of bleeding may have been related to this class of medications.

Since the relationship between SSRIs/SSRIs and decreased platelet aggregation has been reported, several studies have been published. Most concerning, studies in cardiac surgery patients have found an association with increased mortality perioperatively for patients on SSRIs.⁴ Another recent meta-analysis found an association between SSRIs and increased perioperative bleeding.⁵ A recent study in the facial plastic literature examined postoperative bleeding complications during facelift surgery. An association of increased hematomas was not detected in SSRI users, but the authors remarked that their study may not have been sufficiently powered to detect a difference in rate of this rare complication.⁶ However, another study that looked at cosmetic breast surgery demonstrated a 4-fold increased risk of postoperative hematomas requiring intervention.⁷ Measuring blood loss is not routinely performed in oculoplastic surgery, given the infrequent use of suction. A recent commentary highlighted the difficulty in attempting to perform randomized controlled trials on the management of SSRI medications before and after elective surgery.⁸

However, despite their known association with bleeding, there are many reasons why it would not be wise to discontinue

these medications prior to surgery. Most importantly, serotonin withdrawal syndrome, known as “discontinuation syndrome,” can lead to lightheadedness, dizziness, and insomnia. It may also acutely exacerbate underlying anxiety or depression and has been shown to increase suicidality in these patients. Finally, as this class of medications is also used routinely to treat chronic pain, there are some anecdotal reports which suggest that discontinuing these medications can lead to increased sensitivity to pain in the postoperative period.

At this time, there are no recommendations in the oculoplastic or ophthalmologic literature regarding management of antidepressants prior to surgery. However, the authors have recently begun to counsel patients on the risk of intraoperative bleeding, swelling, and postoperative complications if they are on these medications and always specifically query patients about their use of this class of medicines. This is especially important in patients where the authors are discussing elective and potentially sight-threatening procedures, such as lower eyelid fat removal and orbital surgery. This is also an important consideration when planning an office surgery if there is no suction available. Although there is no specific remedy to this problem, the authors suggest that oculoplastic surgeons be aware of their patient's medication history, as these antidepressants may lead to depressing outcomes in their patients if not properly anticipated prior to surgery.

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