

SHORT COMMUNICATION

Supratrochlear Artery Thrombosis After Mohs Micrographic Surgery: Managing Anticoagulation in the Persistently Bleeding Patient

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A 68-year-old non-smoking male with a history of atrial fibrillation managed via cardiac pacemaker and anticoagulation (aspirin and rivaroxaban) underwent Mohs surgery of a basal cell carcinoma (BCC) of the nasal tip. The patient elected for combined repair using a paramedian forehead flap (PMFF) and two full-thickness grafts to restore cutaneous and mucosal epithelium.

After successful placement of the axially-based PMFF, the patient had slight multifocal oozing from needlestick points and pedicle margins. The exposed pedicle edges were lined with kaolin-impregnated gauze, with care to avoid tamponade. Focal sites of surface ooze were treated sparingly with aluminum chloride and Monsel's solution. Postoperatively on day one, the patient had multifocal oozing from the distal flap, pedicle edges, forehead suture line and multiple needlestick sites. The patient's cardiologist determined the patient was "very low risk" for thrombotic complication and anticoagulation could "be stopped for as long as necessary." Anticoagulation was held until postoperative day four and there was no observable bleeding and the flap appeared pink and robust. At one week follow-up, the distal third of the pedicle was grossly necrotic (**Figure**

1). There was no sign of infection and the proximal flap remained pink with intact capillary refill and palpable pulsation from the supratrochlear artery. The necrotic flap was surgically debrided revealing a thrombus located within the supratrochlear arterial lumen (**Figure 2**).

The patient elected for repeated PMFF based on the contralateral supratrochlear artery without reduction of anticoagulation. Exposed pedicle edges were, again, lined with kaolin-impregnated gauze and oozing surface skin foci were spot treated with aluminum chloride and Monsel's solution. Interestingly, postoperative bleeding was negligible and this repair remained viable and the patient had an acceptable cosmetic result without functional compromise.

The cause of the patient's thrombosis is unlikely secondary to infection, styptic application, pedicle tamponade or strangulation. Each bandage change was performed in the office and inspected to ensure intact capillary refill. We are not postulating that thrombosis only occurred within a single vessel lumen, but that only a single thrombus was seen in a large vessel lumen. We suspect the enlarged lumen may also be larger secondary to expansion of

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Figure 1. Flap necrosis.



Figure 2. Incised paramedian forehead flap with thrombus.

additional coagulum behind the initial thrombus.

Current evidence supports that patients on multiple anticoagulants should be continued on current therapy.¹⁻⁵ Warfarin is now making up a diminishing proportion of prescribed oral anticoagulants as newer direct oral anticoagulants (DOAC) have added complexity to periprocedural management.² Relevant perioperative data on DOACs is sparse and mixed, with some evidence reporting that patients on DOAC and aspirin are 10x more likely to develop hemorrhagic complications compared to aspirin alone.^{2,3} Several international guidelines have suggested holding a single DOAC dose for minimal risk bleeding procedures or 24-48 hours preoperatively for low risk bleeding procedures and a survey of dermatologic surgeons found 5% of surgeons hold rivaroxaban and aspirin preoperatively, which deviates from current guidelines.²⁻⁴ Current evidence suggests it's preferable to continue anticoagulation, but holding a single DOAC dose in patients with significant bleeding could be considered. Future prospective studies need to confirm this.

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