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Risk of late bleeding following hemorrhoidal banding in patients on antithrombotic prophylaxis

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Abstract

BACKGROUND: The risk of bleeding following rubber band ligation of internal hemorrhoids is 1%–2%. This risk may be increased in patients taking antithrombotic therapy. The goal of the current study was to find a safer approach to banding without increasing the risk of bleeding.

METHODS: This retrospective review identified patients undergoing banding while on antithrombotic therapy. These medications were held for 7–10 days following the procedure. The number of bands placed while on antithrombotic therapy and their post band complications were recorded.

RESULTS: There were 605 bands placed on 364 patients taking antithrombotic medications. There were 23 complications involving bleeding, a value that was not statistically different from those not taking antithrombotic therapy. Patients on clopidogrel experienced 50% of the significant bleeding episodes and 18% of the insignificant bleeding episodes.

CONCLUSIONS: Holding antithrombotic medication following banding appears to equalize the risk of bleeding to that of patients not taking antithrombotic medications. Patients taking clopidogrel may be at higher risk for bleeding complications.

Anticoagulants are being used with greater frequency in today's patient population. Prophylaxis for heart disease, stroke, and treatment for deep venous thrombosis, or following the placement of cardiac stents, are the most common reasons why patients require some form of anticoagulant therapy.

Hemorrhoidal banding is an office procedure for the treatment of grade 1–3 internal hemorrhoids. It has been shown to be a safe and relatively effective way to treat minimally symptomatic hemorrhoids without a formal operation. Risks associated with hemorrhoidal banding have been well described and range from bleeding, urinary retention, recurrence, and, rarely, sepsis or death. The overall risk of complications following placement of a hemorrhoidal band ranges from 3.5%–10%.[1–6] Bleeding is the most common complication associated with hemorrhoidal banding, with minor or insignificant bleeding being reported in as many as 1.7%, and major or significant bleeding in 0.8% of patients.[1–5]

Recommendations for patients who are candidates for rubber band ligation but who are on antithrombotic therapy have never been formally evaluated. Some studies have shown subsets of patients with a much higher rate of bleeding while on antithrombotic medication, ranging from 7% to 25%.[1,2,7] Many authors recommend not banding such patients until they have been off of their medication for 7–10

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Table 1 Distribution of medications, patients, and number of bandings performed and associated bleeding complications

Medication	No. of patients	No. of bands	Insignificant bleeds per banding	Significant bleeds per banding
Aspirin 81 mg	174	282	7 (2.4%)	3 (1.1%)
Aspirin 325 mg	109	177	5 (2.8%)	0 (0%)
Clopidogrel 75 mg	18	35	3 (8.6%)	3 (8.6%)
NSAIDs	42	74	1 (1.4%)	0 (0%)
Coumadin	21	37	1 (2.7%)	0 (0%)
Totals	364	605	17 (2.8%)	6 (.9%)

days, followed by a further 7–10 days off treatment after banding.[8–10] As is the case with many patients being seen with anal complaints, the correct diagnosis is often not established until after an examination by the surgeon. Thus, many patients present for consultation regarding bleeding without having stopped their antithrombotic therapy. Adhering to a protocol requiring antithrombotic therapy to be held both before and after banding would make a second office visit mandatory if banding is the recommended treatment. This increases congestion of valuable office time and the cost of medical care. Additionally, stopping antithrombotic therapy may place patients at risk for stroke, myocardial infarction, or other complications.

The objectivee of our study was to evaluate our method of hemorrhoidal banding. We instruct patients on anticoagulant or antiplatelet medications to stop taking them for 7–10 days following the placement of the band. Aspirin, clopidogrel (Plavix; Bristol-Meyer-Squibb, Lawrenceville, NJ, USA), and nonsteroidal anti-inflammatory drugs (NSAIDS) are held for 10 days and coumadin for 7 days before being restarted following the procedure. This allows us to perform the banding at the initial visit and to limit the amount of time patients are off their medications.

Methods

A retrospective review covering a 13-year period was performed to identify patients undergoing hemorrhoidal banding while on anticoagulant or antiplatelet therapy. The age, sex, number of bands placed while on antithrombotic therapy, and post band complications were recorded. Patients were excluded if they were not taking these medications daily at the time of banding. All patients were instructed to stop their medications for 7–10 days following the banding. Follow-up occurred as an office visit, typically within 3–4 weeks, with re-evaluation. Patients requiring a second band were typically rebanded at that time, discontinuing their medication as before.

Insignificant bleeding was defined as passage of blood or blood clots per rectum with spontaneous stoppage and no need for further intervention. Significant bleeding included patients requiring admission to the hospital, transfusions of blood, or intervention to control the bleeding. Other complications, including urinary retention, infection, pain, and death, were all recorded as well.

Statistical analysis was performed using R version 2.5.1 (R Foundation for Statistical Computing, Vienna, Austria). Chi-square and Fisher exact tests were used for categorical variables and 2-sample *t* tests for equal variances were used for quantitative variables. *P* values $\leq .05$ were considered statistically significant.

Results

A total of 3,787 bands were placed on 2,297 patients over the study period. There were 605 bands placed on 364 patients while on antithrombotic therapy. Ninety-nine percent of the patients had grade 2 or 3 hemorrhoids. Antiplatelet therapy included aspirin 81 mg, aspirin 325 mg, NSAIDS, and clopidogrel bisulfate 75 mg (Table 1). Anticoagulant therapy included coumadin. A majority of patients were on thrombotic prophylaxis for increased risk of stroke or myocardial infarction. Complications occurred in 44 of the 605 bandings (7.27%). There were 23 (3.7%) bleeding complications, 5 (.8%) patients developed urinary retention, 14 (2.3%) patients complained of moderate to severe pain, and 2 (.3%) patients reported fever/chills following the banding. There were no deaths.

Of the bleeding complications, 17 (2.7%) were considered insignificant, requiring no further therapy, and 6 (.9%) were considered significant, requiring a visit to the emergency room, admission to the hospital, or transfusion of blood products. These values showed no significant difference between rates of insignificant ($P = .05603$) and significant ($P = .4491$) bleeding complications as compared with those reported in the literature[1,2,6] in patients not taking anticoagulation therapy. Essentially, the risk of bleeding is the same in our patient population, who withheld their antithrombotic therapy following a banding, as in a population not taking any antithrombotic therapy.

Six bleeding episodes occurred in 18 patients who underwent a total of 35 bandings while taking clopidogrel. Three (8.6%) patients had significant bleeding episodes, and 3 (8.6%) had insignificant bleeding episodes. Twelve of these patients were taking both aspirin and clopidogrel. Two