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“Evaluation of Preoperative Coagulation Screening in Pediatric Tonsillectomy Patients”

Tonsillectomy is a commonly performed procedure in the pediatric population to reduce the risk of recurrent tonsillitis and improve breathing-related sleep disorders. Post-tonsillectomy hemorrhage (PTH) is a well-recognized, though uncommon, complication of this procedure, with risk increasing with age and history of chronic tonsillitis. The decision to routinely undergo preoperative coagulation studies varies by surgeon, however previous studies have not supported this practice due to a general lack of sensitivity. Thus, we aimed to assess the proportion of occult bleeding disorders diagnosed preoperatively through routine coagulation studies, as well as determine the rate of PTH at Children’s Hospital New Orleans (CHNO).

This was a retrospective review of all patients with records of tonsillectomy with or without adenoidectomy at CHNO from January 2019 - June 2021. PTH was defined as any mention of bleeding that required intervention or return to ED for observation within 2 weeks of surgery. Extracted variables included: age, gender, age at surgery, family and personal history of bleeding, comorbidities, method of surgery and instruments used, pre-operative coagulation lab values (PT, PTT, INR), new diagnosis of bleeding disorder, post-operative bleed, bleeding interventions, post-operative labs, and admission/readmission information.

Of the 1071 patients meeting inclusion criteria, 118 had their surgery canceled, yielding a cohort of 953 patients. Of these, 465 (48.7%) underwent pre-operative coagulation studies, with 69 (7.2%) having an established history of a bleeding disorder. Post-operative bleeds were reported in 33 (3.5%) patients, 21 (64%) of which underwent pre-operative lab testing. Only 2 (6%) of these patients had a prior history of a bleeding disorder, and none received a new diagnosis of coagulopathy following their hemorrhage. The average age at surgery for patients experiencing PTH was 11.6 years, which was significantly greater than the overall mean for this patient group of 7.2 years ($p < .0001$).

Our reported hemorrhage rate is within established literature ranges. The risk of hemorrhage is known to increase with age, and this trend is represented in our results. This suggests that the decision to undergo pre-operative screening should be more strongly considered for older patients in our population, and additional treatments may be considered before surgery to ensure bleeding risks are minimized. Further analysis is warranted regarding perioperative treatment that may be involved in patients that undergo screening, as this may have acted in a prophylactic manner to reduce the risk of bleeding post-operatively. Moving forward, we hope to assess the effect that surgical technique and instrument choice may play in the development of complications overall.