Routine Type and Screens are Unnecessary in Primary Total Joint Arthroplasty: Results from a Practice Change

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INTRODUCTION:
Routine type and screens prior to total hip (THA) and total knee arthroplasty (TKA) are common despite low postoperative transfusion rates. Our institution previously reported a transfusion rate of 1.06% following primary total joint arthroplasty (TJA). The purpose of this study is to present the data one year after the practice change of discontinuing routine type and screen orders in primary TJA.
METHODS: A practice change was implemented on February 1, 2021 whereby the routine ordering of type and screens prior to elective primary total joint arthroplasties was discontinued. We retrospectively reviewed prospectively collected data from February 1, 2021 to January 31, 2022 on patients undergoing elective primary THA or TKA by one of three fellowship-trained arthroplasty surgeons. Data on preoperative type and screens, hemoglobin values, transfusion rates, bleeding disorders, and anticoagulation status were obtained.
RESULTS: A total of 663 patients were included in the study: 273 primary THAs and 390 primary TKAs. Five patients (0.8%) received transfusions during their hospitalization. No patients required an intraoperative transfusion. Postoperatively, 3 patients (1.1%) received a transfusion after THA, and 3 patients (0.5%) received a transfusion after TKA. The mean preoperative hemoglobin in the transfused patients was 12.1 g/dL. Thirteen patients underwent a preoperative type and screen (2.0%), of which two required transfusion (15.4%). Only one patient who required transfusion was on preoperative anticoagulation, and no patients with bleeding disorders required transfusions. Discontinuing routine type and screens led to an estimated cost savings of $124,325.50.
DISCUSSION AND CONCLUSION:
Discontinuation of routine type and screens reduced costs without adverse consequences. Surgeons may consider ordering a type and screen if their preoperative hemoglobin is less than 11-12 g/dL or if significant blood loss is expected on a case-by-case basis. No patients required emergent transfusion, therefore type and screens can safely be considered intraoperatively or postoperatively if necessary.