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CONTRIBUTED REPORTS

**Total Knee Replacement: 65-
Year-Old Male with Severe
Osteoarthritis; Treatment
Previously Refused at
Another Hospital**

Timothy Penn, MD - April 28, 2017

Knowledge and Compassion
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Total Knee Replacement: 65-Year-Old Male with Severe Osteoarthritis; Treatment Previously Refused at Another Hospital

Timothy Penn, MD

Abstract

Perioperative blood loss is a significant concern for patients undergoing total joint arthroplasty. A growing body of evidence has shown tranexamic acid (TXA) to be effective in decreasing perioperative blood loss and transfusion requirements in both primary and revision hip and knee arthroplasty. Dr. Penn reports using TXA in a successful total knee replacement without blood transfusion for a patient previously refused treatment at another hospital.

Case Report

A 65 year-old male Jehovah's Witness presented with severe osteoarthritis in both knees, worse on the right. It was present for many years, but a motor vehicle accident had worsened his symptoms more recently. He had extensive non-operative treatment for several years. He was scheduled in a neighboring community for a total knee replacement, and his surgeon was aware that he is one of Jehovah's Witnesses. At the last minute, his surgeon, because of the patient's refusal of blood transfusion, canceled his surgery. He was seen and evaluated in our clinic and was felt to be a reasonable candidate for Total Knee Arthroplasty. His pre-op Hgb was 12.6 initially, but improved to 13.2, which was only mildly anemic, with oral iron therapy.¹ Other issues were history of stroke, hypertension, and dyslipidemia. His surgery was in the spring of 2017. Closed loop cell saver and tranexamic acid were used – one gram administered IV one hour pre-operatively and one gram administered directly into the surgical wound right before closure. His blood loss at surgery was 200 ml, not enough for cell saver return. Post-op he did well and at two months was released from current care. He was doing well at one-year follow-up.

seeing her in 1 year for x-ray follow-up.

Dr. Penn's Notes

The TXA comes as 1 gram in a 10 mL vial. The pre-operative dose is given within the hour before incision, 1 gram IV over 10 minutes or more. Sometimes it is given full strength, but some of the nurses will dilute it with 10 mL of normal saline, doubling the volume. The reason it is given slowly is because it can cause nausea if given too fast. The exact timing of the pre-operative administration isn't critical. The topical is undiluted 1 gram placed into the wound at closure.

1 Recent studies have determined that twice-daily or daily dosing with oral iron triggers Hcpidin production in the gut, which in turn blocks iron absorption. The current recommended approach is a single dose every other day.

<http://www.hematology.org/Thehematologist/Diffusion/8265.aspx>

About the Author



Timothy Penn, M.D.
Orthopedic Surgery,
Orthopedics

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