USE OF TRANEXAMIC ACID DURING TOTAL HIP ARTHROPLASTY IN A PATIENT WITH SICKLE CELL DISEASE: A CASE REPORT

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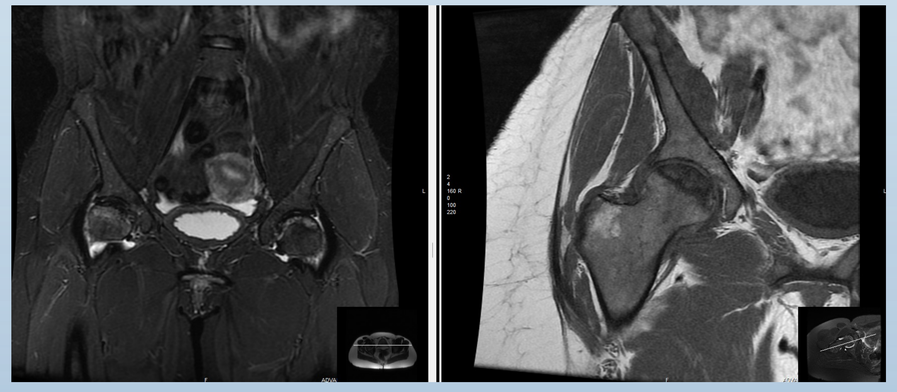
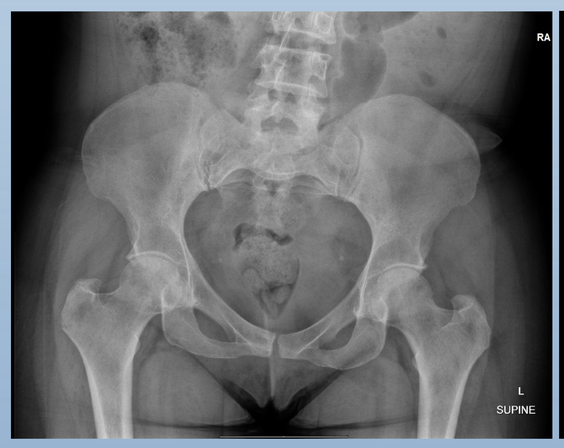
INTRODUCTION

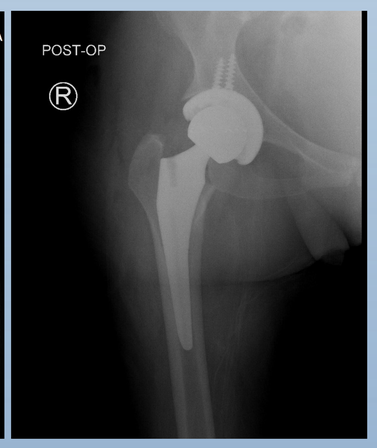
The most common orthopedic manifestation of sickle cell disease (SCD) is avascular necrosis (AVN) of the hip, for which treatment is total hip arthroplasty (THA). Traditionally, tranexamic acid (TXA) is used during THA to mitigate blood loss. However, there are no published reports of TXA being used in SCD patients undergoing THA.

CASE DESCRIPTION

A 47-year-old female with a diagnosis of sickle cell disease presented to the orthopedic clinic complaining of debilitating right hip pain. Clinical and radiographic examinations were consistent with avascular necrosis of the femoral head. She consented to THA via posterior approach. Preoperatively, the patient received 20 mg/kg TXA intravenously and an additional 3g TXA in 50mL saline were applied topically to the surgical field with marked improvements in hemostasis. She required three total units of blood during and after the case and was discharged home on postoperative day 3. At 6 weeks postoperatively she reported improvement in pain and quality of life.







RESULTS & DISCUSSION

Sickle cell patients undergoing THA present a challenge to the surgeon in managing perioperative blood loss. Most SCD patients have a history of repeated blood transfusions, predisposing them to iron overload and transfusion reactions. These patients are also at an elevated risk of major bleeding during surgery. Therefore, minimizing blood loss, and the need for transfusions, should be of chief concern to the surgeon. In the general population, TXA has been shown to mitigate bleeding safely during THA. However, sparse literature exists on the use of TXA in sickle cell patients.

CONCLUSION

Sickle cell disease predominantly affects racial and ethnic groups that are underserved in practice and underrepresented in the clinical literature. Future research, including randomized controlled trials, should be performed to elucidate the role of TXA in mitigating morbidity in THA in this population.

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