Abstract ID: **167** **Clinical** **POSTER**

Comparison of Blood Loss using Intra-Articular Injection of Tranexamic Acid after Total Knee Replacement

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Introduction: Total knee replacement (TKR) is one of the most common surgeries in orthopedic field. Up to 1/3 of the patients require blood transfusion post-operative. Allogenic transfusion has many side effects. Tranexamic acid (TXA) is a synthetic antifibrinolytic agent. We explore the usage of TXA in reducing blood loss and transfusion rate by injecting it into the knee joint during surgery. **Materials and method:** This is a retrospective study done in Hospital Tengku Ampuan Rahimah, Klang. Medical records of patient undergoing TKR between 1 January 2018 till 31 December 2018 were reviewed. Study sample was calculated as 90 patients and divided into 2 groups, one receiving TXA (study) and the other not receiving TXA (control). Post-operative hemoglobin levels and transfusion rate was recorded. **Results:** 45 patients in study group (17 male, 28 female) had a mean age of 65.4 years old and 45 patients in control group (24 male, 21 female) had a mean age of 64.2 years old. Mean post-operative hemoglobin drop in study group was 1.08 g/dL vs 1.86 g/dL in control group. Repeated measure ANOVA determined a p value of 0.001 which shows a significant correlation. Total transfusion rate in study group was 1 vs 9 in the control group. Using chi-square test, the p-value was 0.007 which again shows a statistically significant result. **Conclusion:** Intra-articular injection of TXA following TKR reduces blood loss and the need for blood transfusion without increasing any complication. This prevents many patients from undergoing a potentially hazardous blood transfusion. A routine usage of intra-articular TXA in patients undergoing TKR is recommended. However a large and well designed RCT is required to investigate the risk and benefits of TXA.